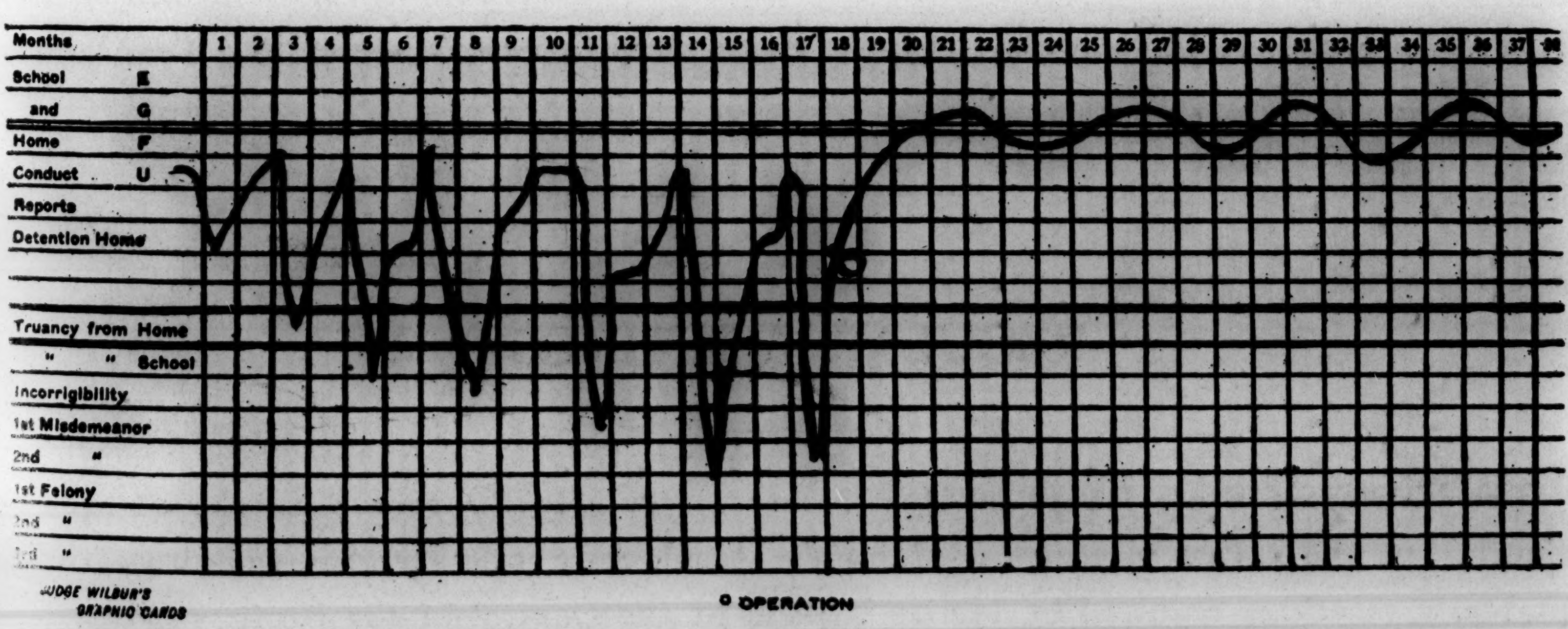
NEEDED LEGISLATION.

CALIFORNIA STATE BOARD OF HEALTH.

MONTHLY BULLETIN

Vol. 6 DECEMBER, 1910. No. 6

THE STATE BOARD OF HEALTH
DECLARES A DIVIDEND



This is not a temperature chart, or the record of a stock-ticker, but a juvenile court index to good citizenship. Read about it on page 399 in this number.

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REGULAR MEETINGS

The California State Board of Health meets regularly the first Saturday of each month, but the stated meetings of January, April, July, and October constitute the quarterly meetings required by law to be held at the Capitol of the State.

By courtesy of the University of California the Food and Drug Laboratory and the Hygienic Laboratory are located in University buildings at Berkeley, California.

Address all communications to the

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DECEMBER BULLETIN.

SOME FACTS AND A FINANCIAL STATEMENT.

By J. E. GARDNER, Attorney for State Board of Health.

Truth, as old as the universe itself, has been recognized by the human race piecemeal. Since a time some millions of years prior to that of which we have any written history, the earth has been round and has maintained its movement in an elliptical orbit about the sun. Yet only in comparatively recent years was the fact discovered. The law of gravitation, operating from the beginning of time and controlling every movement of the solar system and its component parts, remained a mystery until Newton's almost accidental discovery. The power of steam and electricity are of far more recent recognition. While the nature, cause, cure, and prevention of certain diseases, and a thousand other things of common knowledge to-day, have been worked out almost within the present generation. The list of principles, ancient in origin but recent in discovery, is daily lengthened.

One bit of the truth that has received recognition among the last, and the importance of which is not yet much more than guessed at, is that it is the duty of the government to conserve the health of its people, and that money intelligently expended for this purpose constitutes real economy and will become a source of enormous profit. Universal ignorance of and superstition as to the cause of disease for thousands of years, the natural feeling of incredulity with which the average conservative human being receives the announcement of any new thing, selfishness, cupidity, and "politics," with numerous other equally potent factors, have contributed to stay the progress of this work undertaken in recognition of this principle. However, through the accumulation of vital statistics and the dissemination of these records and the discoveries of scientific investigators, through the medium of the newspapers and magazines, through the persistent efforts of health boards and public welfare organizations, and through the influence of such graphic representations of the effects of prevention measures as have been afforded in the construction of the Panama Canal, the people are coming to a very keen appreciation of this work and to demand of their legislative and executive officers proper attention to it.

The increased density of our population, its unprecedented concentration in the great cities, the multiplication of the means and lessened cost of transportation, the vast extension of the territorial jurisdiction of the nation, and the increased intercourse and traffic with the peoples of other nations and different climes and conditions, have united to add almost beyond comprehension to the danger from the introduction and spread of contagious and infectious diseases. These things, too, make it more than ever impossible for the individual to protect himself, more than ever necessary that protection shall be afforded by the State.

California, bounded on the north and east by sister states, on the south by Mexico and on the west by all the world, is so situated that it is and must continuously and increasingly be peculiarly open to the introduction of contagious and infectious diseases, not only those commonly known and reasonably well understood, but especially those exceptionally fatal and but little understood maladies which, by reason of their isolation, until recently have been confined to Asiatic and tropical countries.

These dangers concern the people as a whole; they can be avoided only by union of effort; of necessity protection, to a great extent, must be afforded through state agencies.

This commonwealth numbers among its statutes many, many admirable provisions designed for the protection of the public health. In general, its substantive laws on this subject are the equal of those of the most progressive states, and require but little revision and few additions. In commanding what shall and what shall not be done, the record of California is a good one. It must be remembered, however, that merely to prescribe rules of conduct, even where violation subjects the offender to severe penalties, will accomplish but little. For example, for fifty years there were among our statutes stringent rules forbidding the adulteration and misbranding of foods, but until by the terms of the McCartney act the machinery for enforcing these laws was provided, as such they were almost wholly disregarded. Those who placed upon the market unadulterated goods under truthful labels, did so because of the promptings of conscience or considerations of policy. When the enforcement of the present law was first undertaken by the State Board of Health, a virtual revolution in the labeling of and radical changes in the manufacture of foodstuffs resulted, and it was soon discovered that ninety-nine of every one hundred dealers supposed the McCartney acts to be not only the last but the first word in food and drug laws.

The question of overshadowing import which now confronts the people and their representatives in the legislature is whether funds are to be provided effectively to carry out the provisions of laws already upon the books. Whether the people are going to be satisfied with a volume of dead letters. Whether they will delude themselves into the belief that speaking through their legislature they can issue commands that will enforce themselves. Whether having provided a department of government charged with the duty of enforcing these laws they will tie its hands, or afford it ample means to do the work and hold it responsible for results.

The State Board of Health, among other things, is required to administer the pure foods and drugs laws. This is a work involving the inspection of many thousands of retail stores—groceries, drug stores, confectioneries, bakeries, butcher shops, saloons, etc.—and hundreds of manufacturing, wholesale and jobbing establishments. It involves this inspection not once only, but repeatedly and continuously. A work the extent of which is almost without limit, and one which thoroughly done will result in a profit to the otherwise unprotected consumer wholly out of proportion to the cost.

Properly to carry on this work there should be constantly employed in what are known as the bay cities not less than four inspectors, a like number south of Tehachapi, and as many more throughout the less populous portions of the State. Surely twelve inspectors are not more than might reasonably be required to cover the ground in 209 incorporated cities scattered over a territory approximately one thousand miles long by three hundred miles wide. To handle the sample gathered by this force of inspectors a corresponding increase in the laboratory equipment and the number of skilled and clerical assistants would be required.

For the fiscal years 1909 and 1910, an appropriation of $20,000, or $10,000 per year, was provided for the food and drug work. By the strictest economy in its use the Board was enabled to maintain one inspector south of Tehachapi and two in the northern and central portions of the State—three inspectors in all—with a laboratory and office force barely sufficient for the necessary work of examination and analysis. Even so, in the two years ending August 1, 1910, 2,800 official samples were taken, of which 2,417 were examined, and 1,018, or 42.1 per cent, were found to be in violation of the law.

It must be obvious to any one who will give the subject any thought whatever that with such a handicap the Board can no more than scratch the surface of a very small corner of this great field that should be plowed deep throughout. To put to work four times the present force would necessitate an appropriation of at least $30,000 per year, but two years' thorough inspection would so reduce the practices of adulteration and misbranding that thereafter the enforcement of the law would be comparatively simple and inexpensive. Moreover, $30,000 per year expended by the people in protecting themselves against those who would assassinate them through the medium of adulterated foodstuffs and poisonous drugs, and rob them by means of lying labels, would be a mere pittance when compared with the *$827,025* yearly appropriation for the imprisonment of the less cowardly class of criminals who resort to violence or more open frauds—the burglars, highwaymen, murderers, forgers, and the like.

Closely akin to the pure food law is the act for the sanitation of food producing and dispensing establishments, adopted in 1909. This act is most comprehensive in its terms. It is designed to protect consumers and operatives against a thousand secret dangers that lurk in the filthy precincts of too many factories, canneries, slaughterhouses, hotel and restaurant kitchens, and retail stores, and it contemplates a work which can adequately and economically be done only through state agencies. But not one cent of money has been appropriated to put this law into effect. Result: Like the old food and drug laws, it is a dead letter; not one person in a thousand knows of its existence; while whole train loads of foodstuffs are produced, packed, shipped, and dispensed in open violation of its provisions. With adequate provision for the expense of food inspection, a sanitary inspection under this act might jointly be maintained under the same executive head and with little added expense.

The executive office of the Board, with the immensely increased correspondence and work incidental to the accumulation of vital statistics and the operation of the food and drug laws, is sorely handicapped. Almost daily calls are made upon the secretary to visit distant portions of the State. Demands that should be met. Requests for assistance and advice that if given may easily in one day save to a community the loss of life and money incident upon an epidemic.

Calls to which he can not respond because tied down to the performance or superintendence of clerical work on which his time should not be spent. No other state or county official with anything like the amount of work and responsibility is without an assistant. Then, too, the rapid increase of the work incident to the handling of vital statistics imperatively demands that additional help shall be provided for this purpose. There are physical limitations on the capacity of individuals. When the work to be done exceeds those boundaries, some part of it must be neglected. These things are of too vital importance to the people of California—to their health and happiness and to their commercial prosperity—to be neglected.

Passing again to the subject of good laws ignored. We have very stringent laws forbidding the pollution of the sources of our supplies of drinking water. Rules which if obeyed would eliminate most if not all of the dangers that are constantly present in the water used by our people. Rules obedience to which would move the dreaded typhoid from the top down to the bottom of the list of fatal epidemic diseases. Rules the enforcement of which logically belongs to the state government. Few streams of any size have their origin and termination in one county, and commonly they afford the water supply for individuals, communities, and municipalities widely separated, and having no means of protecting themselves one against the others. That the people should be protected in respect to this—excepting only air—the most common and most essential of the necessaries of life can scarcely be questioned by any one. It is equally true that, involving as it does the expert inspection of numberless streams, the study of problems of sewage and garbage disposal, and the education of a great number of careless and ignorant persons to the importance of compliance with these laws, this problem is one of the biggest and most serious with which the State has to do. Yet not one cent of money has been appropriated for the specific purpose of carrying forward this work. It is imperative that something be done in this matter. As a mere beginning, provision should be made to enable the State Board of Health to employ an engineer inspector and a sanitary chemist.

These are some of the things for which money is needed—things of the utmost importance and which the State has no right to ignore—works for the adequate doing of which appropriations must be made.

Will it pay? Is the legislature justified in diverting into these channels as much of the taxpayers' money as is demanded? Is it a "business proposition" to spend money in the conservation of the public health—for example, in the effort to lessen or eliminate preventable contagious and infectious diseases? The record of vital statistics will answer these questions.

Dr. Snow's startling demonstration in the November Bulletin makes it too plain for doubt that the yearly financial loss to this State through preventable diseases is in excess of $70,000,000. Surely this is a sum of considerable size and worth saving, even to as rich a concern as the State of California. If there is any reasonable prospect of stopping this "leak," there should be no hesitation in making the effort. If the stockholders of a private corporation discovered such an appalling yearly loss, there would be some very radical action looking toward the remedy of conditions making the loss possible, or there would be a complete and immediate change in management. Why should the stockholders in this great corporation, the State of California, be any more willing to ignore the loss of a yearly dividend of $30 to each of them—men, women and children?

The situation is this: The loss is known—a sum six times as great as the total amount of taxes collected for state purposes in 1910. The cause of the loss has been discovered—the inroads of five only of the diseases which have been determined to be absolutely preventable. The remedy is at hand. Is there any reason under the sun why it should not be applied?

Last year, as its contribution toward the work of diminishing this yearly loss, the State appropriated the sum of $37,700, or a trifle more than five one-hundredths of one per cent of that loss. It is as if one, discovering a yearly loss of $1,000 in his business, knowing the cause of the loss and that the remedy would reasonably cost him $100, should appropriate fifty cents to the purpose!

Naturally the next questions that suggest themselves are: Have the results justified the expenditures already made? Is there any reasonable prospect that increased appropriations will lead to greater savings?

The business man who would dole out but fifty cents to stop a leak of $1,000, would not be likely to accomplish a great deal, but if it was found at the end of four years that his annual expenditure of fifty cents had reduced his loss by 500 per cent of the total investment, it would certainly appear that the $2.00 had not been wasted. The public health work of the State, as now carried on, was initiated in 1905, and was fairly under way, with sufficient statistics to indicate results, by the end of 1907. During the latter year the death rate in California was 14.6 per 1,000 of population. In 1909 it was reduced to 13.4, and with only one month's figures to add to the record of 1910, a forecast gives the rate for this year as less than 13.3. The decrease in the death rate during that period means a saving of 1.3 lives per 1,000 of population; means that had the rate for 1907 continued through 1910, more than three thousand of our citizens who are living to-day would have been among the dead. The funerals for the year just ending would have been increased by more than eight per day.

Does this saving in human lives result from attacks upon the ascertained causes of the loss? Let an instance furnish the answer. Typhoid fever is the most to be feared of the epidemic communicable diseases. Yearly it is responsible for more than twice as many deaths as any other such disease (excluding, of course, tuberculosis). During the last four years there has been a special effort (virtually unfinanced) to control it, with the result that while in 1906 there were 657 deaths from this cause, in 1907 there were but 558; there were 540 in 1908; 461 in 1909, and for the first eleven months of 1910, 428. In spite of an increase of 250,000 in population, the record shows 196 less deaths from this cause in 1909 than in 1906, 97 less than in 1907, and 79 less than in 1908. In not more than one out of ten cases is this disease fatal. There were, therefore, in 1906, at least 6,570 cases, which number was reduced to 5,580 in 1907, to 5,400 in 1908, and to 4,610 in 1909—a difference of 1,960 cases between the record of 1906 and that of 1909.

The following table, based on the values given in Dr. Snow's article already mentioned, will illustrate the saving to the State in dollars and cents, by reason of the yearly decrease in this one disease:

Year.	Fatal Cases.				Non-Fatal Cases.			Total yearly loss through fatal and non fatal cases.	Net gain yearly.
	No, of lives lost.	Average age....	Average value of each life.	Total loss by fatal cases.	Number..	Average cost per case..	Total loss through non-fatal cases.		
1906	657	27	$4,000	$2,628,000	5,913	$300	$1,773,900	$4,101,900	
1907	558	27	4,000	2,232,000	5,022	300	1,506,600	3,738,600	$363,300
1908	540	27	4,000	2,160,000	4,860	300	1,458 000	3,618,000	120,600
1909	461	27	4,000	1,844,000	4,149	300	1,244,700	3,088,700	529,300
Total saving in three years									$1,013,200

Typhoid is a disease that in probably 9 out of 10 cases can be traced, directly or indirectly, to an infected water supply. Of the 4,610 people who were thus afflicted in 1909, 4,610 of them would never have been attacked by the disease if the laws forbidding the pollution of water supplies had been strictly obeyed. Of the 461 who died, 414 would have been spared. In 1909, then, a strict enforcement of these laws would have saved to the State in lives taken by typhoid $1,656,000, and in the expense of non-fatal cases $1,244,700, or a total of $2,900,700.

By means of most limited inspection, by education of the people as opportunity has offered, and by consultation, advice and encouragement, these unfinanced efforts to secure a compliance with the requirements of these laws, have been worth to the State $1,013,000 net, during the last four years. Can there be any excuse for a state that will refuse to invest a few thousand dollars in a venture that pays so well?

But typhoid is one item only. The decrease in the death rate for 1910, as above noted, shows that 3,090 lives were saved this year that would have been lost with a continuance of the death rate of 1907. According to the estimate of Professor Fisher, of Yale University, the average economic value of a human being at death is $1,700. We have, therefore, the sum of $5,253,000 saved to the State in one year by reason of improved health conditions since 1907. This sum does not include the immense value of the lessened number of non-fatal cases concerning which there will be no accurate data until morbidity returns can be made complete; nor have we considered the priceless value of health and life to the individual and his family.

Compare the total appropriations for the year 1910, devoted to all branches of the public health service, with the saving during that year in the one item of typhoid: $37,700 as against $529,300, or a net surplus of $491,600. Compare the total appropriations for the years 1907 to 1910, both years included, with the saving in 1910 by reason of the reduced death rate: $135,400 against $5,253,000, or a net surplus of $5,117,600. In other words, as its contribution toward the work of pulling down the death rate to its present place, in four years the State has spent $135,400, while its net profit through that process for but one of those years is $5,117,600, or nearly 400 times the total investment.

The profit for this one year would cover an annual public health appropriation of $500,000 for more than ten years. These figures loom startlingly large, but such an allowance would be less in proportion to population than the sum set apart annually for the purpose in Pennsylvania. Upon an annual investment of $1,000,000 in public health work, that state gives its earnings as 766 per cent in four years. Results to this date indicate that in California, where the efforts of man are so loyally seconded by nature, the earnings would be many, many times greater.

The work has now been continued for a time sufficient to put it out of the experimental stage. As a profit winner its place is established. As a business proposition it is no longer subject to doubt. It is now up to the people, represented in the legislature, to say what shall be done. Looking at the matter from any view point, can there be any one so hopelessly obtuse as to wish to refuse substantially to increase the investment? Shall not the people of this State imperatively demand that to the work of protecting their lives and health at least as much money shall be appropriated as is allowed for the protection of farming, forestry, and live stock industries?

CALIFORNIA'S FINANCIAL RATING IN HEALTH CONSERVATION.

By William F. Snow, Secretary.

There is ample evidence to prove that California is receiving large yearly dividends on all her varied investments in health conservation. This may be demonstrated upon any basis of progress—social, moral, or financial. But these dividends are largely in the nature of decreases in the great annual losses to which the public is accustomed, and which from time immemorial have been considered as unavoidable. It is always easier to point out ways for developing profits from new business than to prove convincingly that immense savings can be realized by better methods applied to business already established. And this is the situation with regard to public health conservation.

It will require tact, patience, and persistent effort to convince the citizens of California that there is actually occurring from preventable diseases an annual per capita loss of $45. The total amount of this loss, $100,000,000, seems preposterous, while the individual's loss, $45, seems insignificant and often not in accord with personal experience. Of course, the $45 is only an average. When a man has typhoid fever and loses $300 in wages, nurse's and doctor's bills before he gets well he represents this averaged loss for more than five others for that year. Similarly if he can be saved from having typhoid his gain represents the averaged profit for six persons. But the five other persons do not receive any cash dividend and are not conscious of any tangible benefit; the man himself often does not know he has been saved from the disease, or thinks he would not have developed it even if he had been exposed. All six of these men, however, realize that every expenditure for health protection means money to be raised by increasing the tax rate. It is unreasonable to expect that these men will vote the necessary appropriations for public health administration until they have fully informed themselves upon the necessity for such appropriations. This is primarily a problem of popularizing preventive medicine methods and demonstrating the use of vital statistics in checking up the results of applying them.

That the public has been roused in other states to a much greater degree of activity in health conservation than has been evidenced in California, is apparent from the figures given in the following table. It will be seen that California ranks *fourth* in per capita wealth, *fifth* in total assessed valuation of property, *sixth* in population, *eleventh* in total yearly appropriation for health work, *twenty-second* in per capita health appropriation, and *twenty-second* in its state tax rate for public health, on each one hundred dollars of assessed valuation. It will also be seen that Pennsylvania, with a per capita wealth of $232 less than California, provides a per capita health appropriation of more than eighteen times that of California; and Florida, with less than one fifth of California's per capita wealth, appropriates thirty-six times the latter's tax rate per one hundred dollars of assessed valuation of property.

In other words, Pennsylvania's tax rate for health conservation exclusive of expenditures in cities is over sixteen times as great as the California rate. Pennsylvania's tax rate applied to California would raise $607,692 for the annual expenditures for health conservation; that of Florida would raise $1,341,599. The average per capita health appropriation for the entire twenty-two states is three and one half times California's appropriation. This means either that California has fewer and less expensive public health and sanitation problems than her sister states, or is more indifferent to them.

California has more natural advantages for the conservation of health than any other state in the Union, but her appropriations for health administration are entirely inadequate. The figures given below are evidence that it is reasonable and in keeping with progress in other states to expect the 1911 legislature to bring this division of state government up to the standard of efficiency which should be maintained.

STATE.	Per Capita Health Appropriation in Mills.	Total Annual Appropriation.	Population.	Total Assessed Valuation.	Per Capita Wealth.	Rate of Taxation Mills per $100.00.
1. Pennsylvania	286	$1,500,000	7,665,111	$5,769,777,327	$753	26.9
2. Dist. of Columbia	205	68,980	331,069	312,473,714	950	22.1
3. Florida	100	75,000	752,619	130,671,226	173	57.4
4. Vermont	75	26,500	355,956	185,826,798	522	14.3
5. Colorado	58	45,000	779,024	Not available.		
6. Utah	53 5	20,000	373,351	146,204,050	392	13.7
7. Idaho	47.8	15,500	325,594	120,815,384	371	12.8
8. Massachusetts	42	140,500	3,366,416	4,574,136,145	1,357	3
9. Rhode Island	37	20,000	542,610	497,547,560	918	4
10. New Hampshire	31	13,600	430,572	249,219,335	579	5.5
11. Montana	29.6	11,000	376,053	280,401,064	745	3.9
12. New Jersey	28.4	72,000	2,537,167	Not available.		
13. Kansas	27.2	46,000	1,690,949	2,511,260,285	1,485	1.8
14. North Dakota	24	14,000	577,056	280,000,000	485	5
15. Delaware	22.5	4,500	202,322	Not available.		
16. Connecticut	22	24,500	1,114,750	Not available.		
17. Maine	20.6	15,250	742,371	364,898,714	492	4.2
18. Virginia	19.4	40,000	2,061,612	579,565,539	281	6.9
19. Washington	18.6	21,250	1,141,990	790,419,826	693	2.7
20. Indiana	17.9	50,000	2,700,876	1,776,132,096	658	2.8
21. New York	16.6	152,500	9,113,614	9,666,118,681	1,058	1.6
22. California	15.8	37,500	2,377,549	2,337,279,750	985	1.6
Twenty-two states.	54.5 mills average.		39,558,641 total population.		$710 average.	8.6 average.

It is rather startling to be told that it is from one to four times as safe to live on the Isthmus of Panama as to live in California, yet that statement has been made and is borne out to this extent: In 1909 the death-rate among the white Americans connected with the Panama Commission was four per thousand, and the death-rate among the entire population of 135,000 in the canal zone was only 18.1 per thousand. But this is not so much to California's discredit as it is greatly to the credit of the Isthmian Canal Zone. It has been brought about through splendid administrative organization and the provision of funds far in excess of any appropriations ever made for similar work within the states. The sanitation work on the isthmus costs approximately nine mills per day, or $3.28 per year per capita. This rate applied to California would provide over $7,800,000 for annual expenditures on sanitation and public health work.

All these figures are cited to show California's comparative tax for health conservation. Fortunately, the conditions of the Panama Canal Zone do not exist here, nor do the problems of Eastern and Southern states present themselves with the same degree of seriousness. But California does have many important problems in health and sanitation which can only be solved when sufficient funds have been provided for the purpose.

A diminishing death-rate tells as definite a story concerning the health and sanitation progress of a state, as bank clearings tell concerning its growing prosperity. People do not ordinarily die unless something serious happens to them. The death-rate per thousand of population is a means of expressing the frequency with which this happens. In California it will be seen that the death-rate has steadily lowered in the cities, and has fluctuated in the country. It is not a coincidence that the efficiency of health administration in the cities, and the expenditures for sewers, water supplies, and general sanitation have steadily increased during this period of decline in the death-rate.

Number of Deaths from all Causes per 1,000 Population.

California, 1906–1910, inclusive.					Average for whole United States registration area.	
Year.	Cities.		Rural.		Cities.*	Rural.*
	Column I.	Column II.	Column I.	Column II.		
1906	22.0*		13.7*		17.8	14.1
1907	21.9*		15.8*		18.0	14.5
1908	20.3*	14 9§	16.8*	13.3§	16.5	14.0
1909	19.2†	14.1‡	16.0†	12.7§	not available.	
1910	19.5†	14.3‡	15.2†	12.0§	not available.	

*Federal census figures as published, based on normal rate of population increase calculated from 1900 census.

†Projected on basis of figures in column II upon ratio shown between columns I and II for year 1908.

§State Board of Health figures, based on the corrected rate of population-increase calculated back from the 1910 census. The grouping of cities in state reports also differs slightly from the grouping used by the United States census.

‡Out of twenty-two freeholder charter cities ten had death-rates below this figure for 1909, but the average for these cities was 14.1. It will be noted that the estimate for 1910 shows a slight increase over this average.

It is probable that the increase in the death-rate among the rural population in California from 1906 to 1908, as published by the United States census, is due largely to the State Board of Health's perfecting its machinery for the reporting of all deaths. The death-rates in city and rural population for 1910 are evidently less than the similar rates will be for the whole registration area when calculated by the United States census. It is not likely that the cities of Cailifornia will be able to reduce their death-rate much further until the administration of public health in the counties is brought up to a standard at least as efficient as that maintained in cities. From an administrative point of view the county health office is the one which needs to be equipped with adequate funds and power to do things. The table printed above shows on being reduced to a common factor the following ratios:

	Year.				
	1906.	1907.	1908.	1909.	1910.
Cities	123.2	122.7	113.7	107.6	109.2
Rural	76.8	88.5	94.1	89.6	85.2

Rural sanitation must be counted upon to lower both the city and the rural rates. From a sanitary point of view a city is just as large as its contributing territory, and this territory is often largely under the jurisdiction of county health officers. It is, therefore, just as much to the interest of the cities to have efficient health administration in the counties as it is to the interest of the counties themselves. Some careful legislation should be framed providing for the proper enforcement of the water pollution laws, and other laws bearing particularly upon the sanitation of our farm and mountain districts; but the chief needs of public health administration in California are adequate appropriations.

The county supervisors now have the power to appropriate a one-half mill tax on each dollar of assessed valuation of their respective counties, exclusive of incorporated cities and towns, to be used for the purpose of preventing the introduction of communicable diseases, or controlling their spread, or for general sanitation purposes. This tax if levied, would raise a very considerable fund for rural health administration. But the fact that not a single county has made use of this provision of the law during the past two years it has been in force, is evidence that ordinarily boards of supervisors will not act unless the State and the citizens bring the need sharply to their attention.

REPORT ON RECOMMENDATIONS OF THE HEALTH OFFICERS' CONFERENCE.

By DR. WILLIAM SIMPSON, Health Officer Santa Clara County, Chairman Committee on Resolutions.

The county and city health officers met in convention at San Diego, November 16th to 19th, as the health officers' section of the California League of Municipalities. The sessions were interesting and profitable throughout. I have been requested by the State Board of Health to present a paper on "Needed Legislation for 1911." I shall not read a paper, but will spend the time at my disposal in emphasizing one point. We are not so much in need of more law, as we are in need of better knowledge of the existing laws and better enforcement of them. We are in need of education of the people in these matters, and of placing ourselves in closer sympathy with the public.

We are members of the medical profession on account of our training, but we are officials of the people by reason of our office. We realize, as the majority of physicians do not, that a great many people consider the medical profession as a "closed corporation."

In the best interests of citizens and physicians we should endeavor to persuade medical societies to prepare programs for open meetings, to invite the newspaper men and other prominent laymen to attend the County Medical Society sessions.

The State Board of Health is doing splendid work in this direction with its monthly bulletin, and every health officer should enlist the support of his legislators for the appropriation of sufficient money to enable the Board to continue its present policy in this direction.

The enforcement of health laws is largely a matter of educating the public to see the necessity for their rigid enforcement. Uniformity of standards and details as to administration are vitally essential to rapid progress in health-work. The resolutions which I am to present for your adoption have been based upon our discussions of the past three days, and constitute an attempt on the part of your committee to formulate in words what it believes to be the consensus of your opinions.

REPORT OF COMMITTEE ON RESOLUTIONS.

1. *Resolved*, That the following uniform definitions be accepted by the health officers of the State of California, and recommended to the State Board of Health.

The word *quarantine* to apply to every member of the household, including the bread winner.

The word *isolation* to apply to the segregation of the patient from the other members of the family without restriction of the liberties of the latter, but with placarding of the house.

The word *reportable* to apply to all those diseases in which the physician or family shall immediately report the fact or suspicion of the disease to the local health officer, but in which responsibility for any further action shall rest with the health officer.

2. *Resolved*, That section 13 of the public health act, relating to quarantinable diseases, be changed to include only the following: (1) Bubonic plague; (2) cholera; (3) yellow fever; (4) typhus fever; (5) smallpox; (6) scarlet fever; (7) diphtheria.

3. *Resolved*, That a new section of the law be provided for the following isolation diseases: Anthrax and glanders affecting human beings, acute anterior poliomyelitis.

4. *Resolved*, That the list of reportable diseases be amended to read as follows: Measles, chickenpox, erysipelas, pneumonia, hookworm, amœbiasis, cerebrospinal meningitis, trachoma, whooping-cough, mumps, dengue, tuberculosis, diphtheria, tetanus, leprosy, syphilis, gonococcus infections.

5. *Resolved,* That the Conference of Health Officers of California heartily endorse the action of the State Board of Health in placing syphilis and gonococcus infections on the list of reportable diseases.

6. *Resolved,* That scarlet fever shall be quarantined for six weeks, or until desquamation is complete in the judgment of the local health officer.

7. *Resolved,* That physicians be required to report to the local health officer all death occurring, in which there has been no medical attendance prior to twenty-four hours before death, or within twenty-four hours of death. Under such conditions the health officer may notify the coroner that an autopsy is necessary.

8. *Resolved,* That the last sentence of section 3 of the vital statistics law, referring to the registration of deaths, shall read: Each subregistrar shall note in legible writing, over his signature, the date each certificate of death was filed, and shall forthwith forward the certificate to the county health officer of jurisdiction, and in all cases before the fifth day of the succeeding month, all subregistrars and county health officers to be subject to the supervision and control of the State Registrar of Vital Statistics.

9. *Resolved,* That in the appreciation of the continued efforts of the United States Public Health and Marine-Hospital Service for the benefit of California we wish to express our approval of this service, and to urge our representatives to emphasize before congress the great importance of continuing and amplifying the plague eradication work now being done.

10. *Resolved,* That this Conference of County and City Health Officers be organized as an annual conference, with the Secretary of the State Board of Health as permanent chairman, and an executive committee of five, to be appointed by the chair, to represent the State as follows: (1) South of Tehachapi; (2) San Joaquin Valley; (3) Sacramento Valley; (4) Coast Counties Area; (5) San Francisco Bay District.

Be it also resolved, That this executive committee request the legislature to require that all counties send their health officers to this conference; and that it be the sense of the conference that all cities should send their health officers.

These resolutions were all very frankly discussed and finally endorsed as a body of recommendations to the State Board of Health for proposing changes in the present health laws and regulations.

An interesting discussion followed a paper presented by Dr. Bogle, in which a plan for reorganizing the State Board of Health was presented. The central idea of the paper was the upbuilding of the county health office and the establishment of a State Board of Health, composed of the fifty-eight county officers, who should elect an executive committee of seven, this committee to elect a president, who should be the state health officer.

Opinion was more or less evenly divided as to the practicability of such an organization, but every one endorsed the details of the plan so far as they related to increasing the authority and dignity of the county health office. The paper was referred to the executive committee for further consideration of its recommendations.

Mrs. Samuel Brust, secretary of the San Diego Tuberculosis Association and a director of the California State Association, ably discussed the need for close coöperation between the welfare organizations and the health officers of the State, placing special emphasis on the need for the legislature establishing sanatoria for the care of tuberculosis patients.

The conference adjourned after votes of thanks to the various San Diego committees on arrangements and the U. S. Grant Hotel for the many courtesies extended.

The California League of Municipalities will meet in Santa Barbara in 1911. The Conference of Health Officers is greatly indebted to this league for its invitation to meet with them, and will avail itself of the opportunity to do so. The full proceedings of the conference will be published as the health section of the league proceedings.

REPORT ON RECOMMENDATIONS OF SCHOOL SUPERINTENDENTS.

By E. **Morris Cox**, Assistant Superintendent of Schools, Oakland, Chairman Committee on Health Legislation.

The county and city superintendents of California are becoming deeply interested in health conservation as an administrative measure. The committee which made the report below has been in session a number of times during the year, and has considered many minor modifications of the recommendations outlined in the summary, but in general the report presents the important health conditions needing legislation:

REPORT OF COMMITTEE ON HEALTH LEGISLATION.

To the County and City Superintendents:

Your committee, appointed September, 1909, to confer with the Secretary of the State Board of Health in reference to the health laws, and conditions relating to the schools, desires to report as follows:

We believe that it is imperative that more attention should be given to the health of the school teachers and children. There is much that should be done in curing the ills already existing, but it is our opinion that the particular emphasis of our work should be on the prevention of disease. The work now being done in many of our schools in detecting and remedying physical deficiencies, meets with our hearty approval, but we agree with Dr. Hoag, Dr. Foster, and others, that we should endeavor to devote the energies of our school departments much more toward the prevention of diseases, and physical defects than we are now doing. By conference of committee members and in meeting of the committee we have discussed many matters coming under the work of our committee. It is our conclusion that we need agitation and education more than legislation in health matters. There are a few matters that can be considerably aided by new legislation, but, in the main, we believe that our attention should be directed toward developing a stronger sentiment for better health supervision and inspection.

The discussions of our committee led to the division of the matters we believe essential at this time under twelve heads. We here give the brief of our discussions and follow with our recommendations.

I. The practices in California in reference to the quarantining of contagious diseases and the length of time of exclusion from school of children affected by any of these diseases or coming from homes where such exist are at such variance as to leave the State with almost no protection against their spread. There is a somewhat popular feeling that measles, mumps, whooping-cough, and some other diseases must come to all and that we had better let them run their course. The reports of our State Board of Health (and those of other states bear out their statements) show that these so-called children's diseases cost the State altogether too much both in money and lives. From four to five hundred persons die in California each year from whooping-cough and measles—about the same as from smallpox, scarlet fever, and diphtheria combined. The life-long effects from defective hearts, disease of the kidneys, defective eyes and ears, weakened lungs and the diseases resulting therefrom are even more serious than the deaths. In addition, the cost for physicians, nurses, and medicines and the time lost would pay the cost of radical measures for the prevention and eradication of these diseases. Dr. Snow estimates that the money cost of these diseases must be more than $2,000,000.

Your committee recommends that the State Board of Health be granted authority to prescribe the time for which children should be excluded from school on account of the various contagious diseases and also who shall be excluded because of them.

II. There should be the closest cöoperation between the various health authorities. Wherever there are school health officers, the same should have jurisdiction in the schools, but the authority of the state, county, and city health officers should be supreme in reference to contagious diseases.

We desire to recommend that in all cases where there are school health officers, such persons should be in the employ and under the authority of the school boards. The work of such officers is so closely related to school work and the school program as to make active cöoperation with the teachers indispensable. We wish to urge, too, the importance of selecting such officers because of their efficiency in health work. It does not follow that a good practitioner will make an efficient health officer. The work of these officers is not the cure but the prevention of disease. We desire to call the attention of the State Board to this matter, and ask that in the granting of certificates, they take these matters into careful consideration.

III. Outside of our cities, our school authorities, trustees, teachers, and superintendents, feel the need of some health authority upon whom they have the right to call for expert advice. There are frequently problems of sanitation, quarantine, and such like upon which school authorities need such assistance. We, therefore, recommend that a law be enacted providing that except in cities operating under freeholder charters, school authorities shall have the right and authority to call upon county health officers for advice in health matters as they now have the authority to call upon district attorneys for advice in legal matters, and providing that it shall be the duty of such health officers to give such advice, and that in cities where there is no school health officer these duties shall devolve upon the city health officer.

IV. The matter of vaccination has been ever present. It is still as unsettled as ever. The judgment of our committee coincides with that expressed at our previous conventions. We believe that the law should be made to apply to all schools alike, and that the burden of enforcement of the law should be placed upon health officers, the school officials reporting to them any facts that may be required in the matter.

V. The physical examination of teachers has been required in many cities. The results show that there are very strong reasons why this should be universally required. Unless the plan is taken up and applied with care it will result in very serious hardship. Our committee is unanimous in the belief that a law should be enacted requiring physical examination of teachers, but, that at present, the law should be silent as to the exclusion of any one from school work, leaving that matter to the boards of trustees and boards of education. We believe that in every county there should be appointed an advisory board of medical examiners and that all teachers should be required periodically to submit themselves for examination, provided that school departments having health officers shall provide for the medical examination as herein prescribed. The certificate of health given by this board should be required for presentation before employment, said certificate to be in the form prescribed jointly by the State Board of Health and State Board of Education.

VI. A bill was presented before the last legislature providing for a minimum requirement in the size of school grounds. There has been very much favorable comment in this matter. We are becoming awakened to the needs of proper playgrounds. It is an uncommon thing to find a public ground in a city large enough for a game of baseball. We believe it to be a wise measure to require by law that hereafter no school building shall be located on a lot less than one half acre in size, and that for each class room in addition to the first one there shall be one fourth acre added.

VII. There is like need, too, for the establishment of certain minimum requirements in reference to the location, lighting, and sanitation of school buildings. The duty imposed upon superintendents of approving plans would be made much more acceptable if the law should prescribe the adoption of certain requirements or rules in reference to the amount of air, space, placing of stairways, area and location of windows, plumbing, toilets, etc. We believe that the approving of such plans should be left as the law now provides, but we urge a provision authorizing and requiring the State Board of Education and the State Board of Health to jointly prescribe the minimum requirements in reference to the location, lighting, and sanitation of school buildings to which all plans must conform before being approved by superintendents.

VIII. The work now being carried on both in this State and elsewhere in the inspection of school children has shown that great good can be accomplished in this way. Even in cities and states when the examination is performed by teachers, the work is proving of great value. Colorado, Massachusetts, Connecticut, and other states now require such examination to be performed by the teacher or principal during each school year and provide for a proper reporting of the results and treatment of those in serious need. California ought not to longer delay in this matter. We commend the laws of these states for our consideration and adoption.

IX. We have found Dr. W. F. Snow, Secretary of the State Board of Health, exceedingly helpful and cöoperative in this work and he is in accord with our recommendations. We note that the law provides that the State Board of Health shall at "each session of the legislature make a report with such suggestions as to legislative action as it deems proper." Inasmuch as the recommendations of this committee are health measures we suggest, with the approval of Dr. Snow, that the superintendents appoint a committee to cöoperate with the Health Board in presenting these matters to the legislature.

X. We also urge that in all future editions of the school laws such portions of the general health laws as relate to the schools shall be printed therein.

XI. Many states are now demanding very different work in the schools in reference to hygiene and sanitation from that usually given. The physiology teaching in our schools has not met our modern requirements. Some states, notably Montana and Kansas, have turned from the school authorities and have asked the health boards to prescribe the work that shall be done in the schools. Such a step can not be a wise one except in places where the school authorities refuse to recognize the crying need. The time is at hand for California to act in this matter. The time for the adoption of a new state text in physiology is at hand, and we should urge the State Board of Education to adopt a text-book in line with present demands for instruction in hygiene and sanitation.

XII. At the last meeting of this convention the resolution in reference to the use of tobacco was referred to our committee. We heartily approve of all just measures for the discouragement and prevention of the use of tobacco, and we believe that school officials both in precept and example should be foremost in these efforts, but we also believe that experience shows that it is through education and not legislation that the greatest good can be accomplished in this matter. Therefore, we recommend that no resolution calling for legislation in reference to the use of tobacco be adopted, but we do urge that we commit ourselves to the education of those in our schools to the evil effects of the use of tobacco, and particularly to the great danger to youth in the use of cigarettes.

SUMMARY OF RECOMMENDATIONS.

We recommend as follows:

1. That vigorous measures be taken to, so far as possible, prevent disease among the school children, and we particularly urge that the State Board of Health prescribe the length of time during which children should be excluded from school on account of contagious diseases.

2. (*a*) That all school health officers shall be employed by and under the authority of school boards, and, (*b*) that school health officers be certificated and chosen because of their efficiency in health work, rather than as practitioners.

3. That, outside of cities, the school authorities shall be given the authority by law to call upon county health officers for advice in health matters, and that within cities having no school health officers, these duties shall devolve upon the city health officers.

4. That the vaccination law should apply to all schools alike, and that the burden of enforcement shall be placed upon the health officers, the schools furnishing such reports as may be required by law.

5. That a physical examination of teachers be required by law, such examination to be conducted by the health officers in such schools as have them and elsewhere by an examining board in each county, and that the form of certificate be prescribed jointly by the State Board of Education and State Board of Health.

6. That attention be given to the size of school grounds. No school building should be located on less than one half acre with an additional one fourth acre for each class room, and we favor such a requirement by law.

7. That the State Board of Health and State Board of Education, jointly, be authorized to prescribe the minimum requirements in reference to the location, lighting, and sanitation of school buildings to which all plans must conform before the same shall be approved by superintendents.

8. That steps be taken to bring about the physical examination of all children in our schools. Where this can not be done by health officials, it should be done by teachers and principals.

9. That this convention appoint a committee to coöperate with the State Board of Health in reference to the matters recommended in this report and other health legislation relative to schools that may be proposed.

10. That hereafter such portions of the general health laws as relate to the schools, shall be printed in the editions of the school laws.

11. That at the earliest opportunity the State Board of Education adopt a text-book in physiology, giving due attention to hygiene and sanitation.

12. That we urge all school authorities to devote themselves to the teaching of the evil effects of the use of tobacco and particularly to the great danger to youth in the use of cigarettes.

Respectfully submitted by the committee.

ROY W. CLOUD,
MAY E. DEXTER,
F. F. BUNKER,
DR. E. C. MOORE,
E. MORRIS COX, Chairman.

Dr. W. F. Snow, Secretary State Board of Health, met with the committee and approves the recommendations.

LEGISLATIVE NEEDS IN THE SOLUTION OF THE CALIFORNIA TUBERCULOSIS PROBLEM.

By George H. Kress, M. D., Secretary of the California Association for the Study and Prevention of Tuberculosis.

In the consideration of legislative needs for the prevention of tuberculosis, we must of necessity revert to a consideration of the causes of tuberculosis, because preventive legislation implies the prevention of the causes of tuberculosis.

Since the causes of tuberculosis resolve themselves into the two major groups of—

One, the exciting or germ cause, without the presence of which there can be no tuberculosis; and

Two, the predisposing causes or those which lower the resistance of the individual, so that the germ or bacillus of tuberculosis can get a foothold in his tissues.

It will be well to keep this classification in mind in the consideration of legislative measures for the prevention of tuberculosis.

A. THE ATTACK UPON THE EXCITING CAUSE.

In the consideration of the exciting or germ cause, we will briefly indicate preventive measures under the following subheadings:

1. Compulsory Registration of all Consumptives.
2. Compulsory Fumigation of their Homes.
3. Free Examination of Sputum.
4. The Care of Advanced Cases in County Hospitals.
5. The Care of Incipient Cases in state sanatoria, state farms, and semi-charitable sanatoria.
6. The care of ambulant patients in dispensaries.
7. The forcible removal of ignorant and willful consumptives in advanced stages, to county hospitals.
8. Anti-spitting Ordinances.

1. *Compulsory registration of all consumptives.*

The law for the compulsory reporting of all tuberculosis patients should be stringently enforced. The names so reported to the health officer should not be open to public inspection, the primary idea being to allow the local and state health officials to gain an accurate idea of local and state morbidity due to tuberculosis, rather than to give publicity to the names of the unfortunate victims of the disease.

It stands to reason that until our health officials know who our tuberculosis citizens are, and where they live, the spread of the disease will continue, since no educational or preventive measures can be instituted which would reach these persons who, above all other persons are precisely the ones who must be reached. Let us support our state and local boards of health, therefore, in securing an efficient and early enforcement of the compulsory registration law as regards the disease known as tuberculosis.

2. *Compulsory fumigation of consumptives' homes.*

We need local and state laws which would permit the fumigation of houses in which consumptives have lived, without cost to the owners or those who rent the premises. This fumigation should be done without cost, because it is the ill-ventilated and unsanitary homes of the poor who need this fumigation most, and these, precisely, the persons least able to pay for it.

3. *Free sputum examinations.*

The city and state laboratories should make sputum examinations free. Every physician in the State should be able to have sputum of suspected patients examined free. The demonstration of bacilli in the sputa, is a great aid in making patients take proper precautions.

4. *The care of advanced consumptives in county hospitals.*

A law is needed which would require our county hospitals to segregate their tuberculosis patients. Buildings for these patients need not be expensive. In fact, properly constructed open-air shacks are far better adapted for such patients, than expensive heavy buildings, with insufficient window space and poor facilities for ventilation. It would seem to be far wiser to treat hopelessly advanced patients in county institutions already erected and with administration staffs already organized, instead of trying to do these things anew at great expense for a much smaller number of patients. For unless the state or counties paid the railroad fare to a state sanatorium, most of these penniless and advanced consumptives would continue to go to the hospitals of the counties in which they happen to have been transient or permanent residents.

5. *The care of incipient patients.*

The care of these patients may be considered under the headings of

I. Care of incipient patients in county hospitals.
II. Care of incipient patients in a state sanatorium.
III. Care of incipient patients on state farms.
IV. Care of incipient patients in semi-public charitable sanatoria.

Let us consider each of those in turn.

I. *Care of incipient patients in county hospitals.* The law should provide that incipient tuberculosis patients at county hospitals should be segregated, and, if possible, made to live the out-of-door life in tent houses or shacks, instead of being herded with patients with other diseases, or with patients who have advanced tuberculosis.

II. *Care of incipient patients in a state sanatorium.* We are opposed to a law for a single large state sanatorium for tuberculosis in California, and our reasons therefor are that the several hundred thousand dollars necessary to erect, equip and carry on such an institution could be spent in a way to bring far larger results to our State in the fight against this disease. Such an institution would soon be flooded by persons who contracted the disease in the East, unless a residence requirement of a year or more were insisted on. We are convinced, also, that such an institution would not in any way surpass in work and results such institutions as the Redlands Settlement and the Barlow and Pasadena Sanatoria, which are now open to the inhabitants of the State.

III. *Care of incipient patients on state farms.* The suggestion has been made that the State provide one or more state farms on which colonies of consumptives could receive treatment (a modification of the

Pennsylvania plan of using the forest reserves). If these farm colonies can be inaugurated without the expenditure of most all the money for lands or buildings, the plan would be well worth considering. If, however, it meant the purchase of much land from interested land owners at high prices, and the erection of elegant buildings, etc., we would be opposed thereto.

The excellent suggestion has been made that the farm lands attached to the six state lunacy institutions could be used to good advantage for a beginning in this work. These six institutions are the Mendocino, near Ukiah; the Napa, near Napa; the Stockton, near Stockton; the Agnew, near San Jose; the Patton, near San Bernardino; and the Sonoma, near Sonoma.

All that need be erected would be a frame shack hospital modeled after the admirable type devised by Dr. Holden, director of the endowed Agnes Memorial Hospital at Denver. The building he has devised can be built for an extremely low sum, and gives a maximum amount of air, sunshine, and comfort.

The steward of the insane hospital on the farm on which each colony would be located, could purchase the supplies and furnish milk, eggs, vegetables, etc., from the produce of the farm without extra cost for administrative work. The only new employees would be a physician in charge, a matron, and several nurses and orderlies. In this way units of twenty-five patients could make a beginning of several such colonies throughout the State. Surely in private commercial life, advantage would be taken of such land ownership and administrative staffs. Why not, then, to aid the many unfortunate consumptives of this great State, pursue the same common sense policy?

IV. *Care of incipient patients in semi-public charitable institutions.* Up to the present time, California has little to be proud of as regards state aid in the solution of the tuberculosis problem. On the other hand, the entire State may well take pride in such institutions as the Redlands Settlement, the Barlow and Pasadena Sanatoria, which have been founded and have done magnificent work by the devoted efforts of small groups of philanthropic citizens. A state law, at this time, permits the county supervisors to send patients to such institutions as the above, which may be approved by the State Board of Health, and to pay the sum of one dollar a day for their board and treatment.

This sum is, however, not enough, as it costs an average of $10.00 a week in these institutions to care for each patient. This law should be amended to permit the payment of a total of at least $1.50 to $1.75 per day for each such patient, this sum to be paid either in whole by the county supervisors, or in part by the county supervisors, and the remainder by the State.

Certainly, we must agree that the state would in this way get a far greater return for money spent on the consumptive sick, than could result from the erection of a single large sized state sanatorium.

6. *The care of ambulant patients in dispensaries.*

If possible, the State should pass some law allowing the formation of county or city dispensaries, where ambulant cases of tuberculosis could go for diagnosis and treatment, somewhat after the plan in vogue in Pennsylvania. Such an arrangement would have the additional advantage of placing a direct responsibility for looking after the tuberculosis patients on one or more public health officials in every community in the State. A nominal stipend could be given to the physicians, who would have a clinic or dispensary hour one or more times a week. Or, just as well perhaps, the county medical association or the local tuberculosis society might be asked to supply the physicians gratis, allowing the stipend to go to a visiting nurse, who would work in connection with the dispensary. Such a plan as the above, in that it would give every community a group of persons appointed to especially look after the local tuberculosis situation, also appeals to us as more likely to give big and broad results than a single state sanatorium on which several hundred thousand dollars would have to be spent for the care of a comparatively small number of patients, while the great majority of ambulant patients among the poor would have to go to their graves, often with little or no advice or treatment.

7. *The forcible removal of ignorant and willful consumptives to county hospitals or similar institutions.*

It is unfortunate, in one sense, that so much of this disease is found among the ignorant. Not infrequently patients are found who absolutely refuse to take adequate precautions to protect their families, neighbors or fellow-citizens. For such, a law should be passed making it possible for the local or State Board of Health to transfer this type of patient to an institution where the care would be such, that the lives of other persons would not be endangered through such criminal negligence or willfulness.

8. *Anti-spitting ordinances.*

We believe a state law should be passed prohibiting expectoration on the floors of public halls, boarding houses, hotels, and public buildings. We confess we are not so much concerned with expectoration into the streets, nor, if our women continue to wear walking suits with short skirts, are we much afraid of the bad result of expectoration on sidewalks. We know that sunlight, and diffuse daylight and circulating air, kill the germs in a few hours. This fact, coupled with the other that the large volume of air in the open streets must greatly dilute the number of germs leads us to believe that only a small amount of tuberculosis is contracted from sputum expectorated on public highways. But in the closed room of a private residence or hotel or public building, where large numbers of the germs are repeatedly expectorated, the chance of infection must necessarily be much greater.

B. THE ELIMINATION OF THE PREDISPOSING CAUSES.

In the consideration of the predisposing causes, a few preventive measures will be indicated as follows:

(*a*) Protection of food supplies: 1. Milk
    2. Meat
    3. Bake-stuffs.
    4. Pavement stores.
(*b*) Disposition of garbage.
(*c*) Proper housing: 1. Tenements
    2. Factories
    3. Hotels and lodging houses.
(*d*) School improvements: 1. Medical inspection of school children.
    2. Open-air schools.
(*e*) Provision of public playgrounds and recreation centers.
(*f*) General publicity campaign, under the supervision of the State Board of Health.

Owing to the length which this paper has already taken, it will not be possible to go into great detail concerning these and other factors which might be mentioned.

(*a*) *Protection of food supplies.* It stands to reason, that the State has an obligation to its citizens to protect them from harmful foodstuffs.

1. *Milk.* There is no foodstuff which is worthy of more care than the production of a clean and safe milk from healthy cattle, for milk is a foodstuff upon which our babies and invalids, as well as other citizens must, only too often, almost entirely rely for sustenance.

The supervision of the milk supply is a hygienic and not an industrial problem. What care we whether a few thousand pounds more of butter and cheese are produced by this State in the face of the far greater and more sacred obligation of protecting our babies from disease by giving them a clean milk from healthy cattle.

At the present time, the Board of Dairy Commissioners is composed of dairymen who are almost entirely interested in the industrial phase of the dairy industry. This authority should be vested in the State Board of Health, and a law should be passed by the next legislature to that effect.

A law is also needed providing for the compulsory tuberculin testing of all dairy herds. We do not ask that these cattle be condemned, but simply that the results of the tests be registered with the State Board of Health. If this were done for several years, the dairymen of themselves would get rid of these tuberculosis cattle. In other words, they would educate themselves concerning the value of the test, and would be only too glad to avail themselves of its knowledge in getting rid of diseased animals. Later on, a more stringent law might be passed, but, for the present, this would be a real step forward, both educationally and otherwise.

2. *Meats.* Adequate abattoir inspection of meat supplies, both on the hoof and in the slaughterhouses, should be provided for by law.

3. *Bake-stuffs.* Our bakeries should be in properly constructed buildings, the employees healthy, and bake-stuffs carted through the streets should be protected from dust and filth. A law should be passed to that effect.

4. *Open-air or pavement fruit stands.* A State law is needed to insist that fruits and other foodstuffs exposed on pavement stands be properly screened by mosquito or other netting, so that it would not be possible for flies and other vermin to carry infective agents from the sputa and other filth of gutters to the foodstuffs exposed on such stands.

(*b*) *Disposition of garbage.* Garbage should be properly collected in closed containers, and if such garbage is fed to hogs, the State should have the authority to prevent tuberculosis or otherwise diseased animals in such garbage fed herds from getting into the markets.

(*c*) *Proper housing.* Our tenement and factory building laws need revision, and a law is needed insisting on proper cleanliness, and adequate floor and air space and ventilation in the crowded boarding houses and hotels of our larger cities.

(*d*) *School improvements.* The medical inspection of school children, for the segregation of the undertone students, and for the proper correction of physical defects (such as predisposition to tuberculosis), should be amply provided for and by law extended to all parts of the State.

5. More attention should likewise be given to the construction of our school buildings, and the building laws on this subject should be so amended as to virtually make all schoolrooms out-of-door rooms in pleasant weather.

(*e*) *Provision for public playgrounds.* In a similar manner a State law should be passed permitting and encouraging cities and towns to provide adequate park and playground areas and recreation centers. All such agencies are of vital importance in the upbuilding of a physically stronger generation among our poorer classes.

(*f*) *General publicity campaign under the supervision of the State Board of Health.* Last, but not least, we need a large increase in the money appropriation to the California State Board of Health, so that that Board may inaugurate and carry on an aggressive educational campaign against tuberculosis along any lines which, in the judgment of the Board and its officers, may seem valuable.

These, ladies and gentlemen, are a few of the measures related to the solution of the tuberculosis problem of California, which are worthy of consideration and action by our next legislature.

TUBERCULOSIS LEGISLATION.

By WALTER MACARTHUR, Chairman Legislation Committee, San Francisco Association for the Study and Prevention of Tuberculosis.

The San Francisco Association for the Study and Prevention of Tuberculosis has agreed upon certain legislation which it considers most necessary for promoting this important work, and covering two essential points: (1) An adequate study of the tuberculosis problem for the entire State, and (2) the enforcement of regulations providing for the proper protection of the people from tuberculosis. Arrangements should be made for the investigation of the prevalence, causes, and distribution of human tuberculosis in the State, the determination of its relation to the public health and welfare, and the development of ways and means for restricting and controlling the disease. All hospitals, dispensaries and other institutions having medical officers, and supported in whole or in part by public funds, including orphanages receiving aid from the State, should be required to make records of such facts as may be available for the use and purposes of this investigation.

Regulations for the protection of the public should be carefully planned and should cover at least the following points: Reports of physicians and others; examination of sputum; protection of records; disinfection of premises; health officer to direct disinfection, cleansing or renovation; prohibiting occupation until order of health officer is complied with; prohibiting carelessness of persons having tuberculosis; protection of patient's family; providing that physicians shall make a complete statement of procedure and precautions, on a blank to be furnished by the health officer, *et cetera.* Penalty for failures of physicians to perform duties or for making false reports; reporting recovery of patients; general penalty.

Bills of a similar nature were introduced in the last session of the legislature, and the latter, that is, the inspection bill, was passed. The Governor, however, vetoed it, giving us as his reasons that he feared the measure might have the effect of preventing persons afflicted with tuberculosis, or thought to be so afflicted, from securing housing accommodations, due to fear on the part of landlords and others that they would be put to the expense of renovating their premises. We are in hope that a more practical view of the case will prevail in the present instance, and that the legislature and the Governor will see the need of the proposed legislation, and also the fallacy of the reasons given by Governor Gillett for vetoing the bill.

Legislation similar to that here proposed exists in other localities. The city of San Francisco recently enacted a local ordinance following almost literally the language of the bill now proposed. Objections were made to the passage of this ordinance, but these objections have not been heard of since the law went into effect. It is the general experience in similar matters that the alleged objections to the passage of such legislation disappear when the legislation is put to practical test, always assuming that the enforcement of the law is placed in the hands of officials of tact and experience.

We have no doubt that the history of such legislation will repeat itself in the State of California in event that the measure be enacted into law. At any rate, there is no room for doubt that such legislation is urgently needed. An encouraging feature of the situation is that the public generally now recognizes such need, and is disposed to support the proposed legislation.

Other measures looking to the safety of the public health are in course of preparation by other organizations in this city. Among these are a bill to amend the tenement house law, so as to overcome the discrepancy between the existing State law on the subject and the ordinances of certain municipalities. For instance, in the city of San Francisco, the ordinance prohibits the erection of tenement houses of more than three stories in height, whereas the State law places the limit at four stories. The result of this is that builders and officials of San Francisco claim the right to erect tenements of four stories in height, upon the ground that the State law is supreme.

Another measure provides for the establishment of a tuberculosis sanitorium. Representatives of organizations having these measures in hand will doubtless do everything in their power to secure the passage of the respective bills. In such matters of course, unanimity of sentiment and action is desirable and necessary. There is every reason to hope that such unanimity will be brought about and that effort will be centered upon such of these measures as may be of the most urgent importance should it transpire that it be not possible to secure the passage of all bills.

A STATE SANATORIUM FOR TUBERCULOSIS.

MISS CURRY, Chairman.

An appeal from the California Club for a sanatorium for the treatment and cure of tuberculosis. Will you help us to place this cure within the reach of every one in this State, particularly those of limited means?

WHEREAS, It is the sense of the California Club that state and municipal laws should be enacted whereby the spread of tuberculosis in all its forms may be prevented, and whereby there shall be inaugurated a systematic education of the public in the care, treatment, and prevention of the disease, and whereby a state sanatorium shall be established for the scientific treatment of tuberculosis; and

WHEREAS, The California Club has prepared, under the best legal and medical advice, a bill carrying a reasonable appropriation for the above-named purposes, to be introduced in the coming legislature of this state; therefore be it

Resolved, In view of these facts, that the California Club does hereby call upon the people of this State to do all in their power to secure the passage of this bill, and to make personal appeals to legislators for prompt and favorable action in its behalf.

Condensed information sent out by the California Club:

One person out of every nine in the United States dies of tuberculosis.

Twenty-five years ago it was supposed to be due to hereditary taint, and preventive measures were wanting.

To-day it is known that tuberculosis is communicable, preventable, and in its earlier stages curable.

Thousands afflicted with tuberculosis are ignorant of these facts, and thousands are indifferent to its dangers. They are, nevertheless, a menace, not only to the health of their own households, but to that of the community at large.

It is, therefore, the duty of the people of this State to do all in their power to prevent and to eradicate this disease.

The most successful results are obtained in sanatoria established for the specific purpose of treating tuberculosis only.

In Germany this method has reduced the percentage of deaths in the first and second stages of tuberculosis to practically nothing.

Fresh air, proper exercise, nourishing food, and hygienic treatment are important elements in the cure. A sanatorium should be specially designed to supply these features.

Many Eastern states are building sanatoria for the treatment and cure of tuberculosis, based upon the experience of private institutions of that character.

The economic gain to the community by the prevention and cure of this dread disease is enormous.

There are now over three hundred anti-tuberculosis associations in the United States.

THE JUVENILE COURT AS A FACTOR IN HEALTH CONSERVATION.

I. THE VALUE OF MEDICAL INSPECTION TO THE JUDGE AND THE PROBATION OFFICER.

By JOHN A. COLLIVER, A.B., M.D., Medical Probation Officer, Juvenile Court of Los Angeles County.

I have been asked to write upon the medical side of juvenile court work, its importance and necessity; to tell something of the system in other places, and give, as far as I can, what I consider to be the ideal system for this State.

THE MEDICAL SIDE.

I will confine my remarks to the Juvenile Court of Los Angeles County and to the examination of boys. The medical side of juvenile court work does not simply mean a physical examination, for no matter how complete, if not coupled with other data, it is unsatisfactory and often worthless. In all physical examinations, the age, weight, height and certain measurements and physical characteristics are taken. In addition to these, we take account of the bearing upon the cases of all previous illnesses, contagious diseases and injuries, especially to the head. The family history, environment, occupation, school standing, and habits are considered and recorded. Finally, all parts of the body are gone over thoroughly, especially the special senses, throat, teeth and genito-urinary organs. When there is a defect or stigma it is noted. All these are corelated, and endeavor is made to see what relation each or any bear to the boy's present condition.

In considering the environment we take into account broken homes, habits of parents and diet, all of which are strong contributing elements. Many times I think that nearly the whole trouble is due to diet alone. The habits of the boy are covered pretty thoroughly as to church and Sunday school attendance, games most enjoyed, cigarette smoking, opium or cocaine habits, liquor drinking, masturbation and sexual perversion, or any physiological or psychological change from normal.

It will be noticed that many characteristics are noted which are not purely physical, but these are very important and when taken into consideration alone, or with other defects, contribute to the solution of the problem from the physical, psychological, or social standpoint. This is all noted on the card which Judge Wilbur has in his hands when the boy appears before him. He then corelates it with other data at hand, and uses his judgment in the disposal of the case. In addition to this, parents are given written advice in regard to the care of the boy and with another card he is sent to his family physician, or specialist, for examination or operation.

IMPORTANCE OF THIS WORK.

It is important that all boys receive a physical examination, and, I think, much more so for any boy who is apparently abnormal morally. It is surprising how little parents know of their own children, and how many times they overlook the more common defects which, no doubt, contribute to the boy's irritability—the beginning of crime in boys.

For instance, in impacted, decayed or aching teeth we have defects which produce marked irritability in a child and contribute to incorrigibility. Adenoids and tonsils, in the same way, are sometimes responsible, and for the physical improvement alone should be removed. Anything that tends to improve the nutrition and allay all local irritation tends also in turn to help the boy morally.

A classification of boys appearing in court shows that over seventy-three per cent are at the age of puberty. What does this mean? It is the age of profound physiological changes when dominant instincts and emotions begin to awake into life. The sexual passions are born. As a rule every boy with no one to guide him emerges into abnormal experiences; he enters a long and complicated process of adjustment to social surroundings. This is the secretive and vicious habit forming age.

It is not the natural tendency for a boy to be good. As stated above, over seventy-three per cent of boys brought into court, are just at the age of puberty. This is the age, according to many authorities, when the boy tends to revert to the nomadic state of civilization. From a biological point of view, he is mature and in the animal kingdom. The male goes forth from the parental protection to fight and make a home for himself. So, in boys, to-day, we find the tendency to travel in the line of least resistance and revert to the primitive state, manifested in the form of truancies, incorrigibilities, frequent fights, desire for physical supremacy and the lowest deportment school marks of their lives.

To-day the boy must adjust himself to the complications of his social surroundings and, therefore, the training he receives is artificial. Brain cells and fibres must be developed and this requires concentration and effort. The more he does a thing the easier it is, but at first and for many times it is a great effort until it becomes a habit, good or bad.

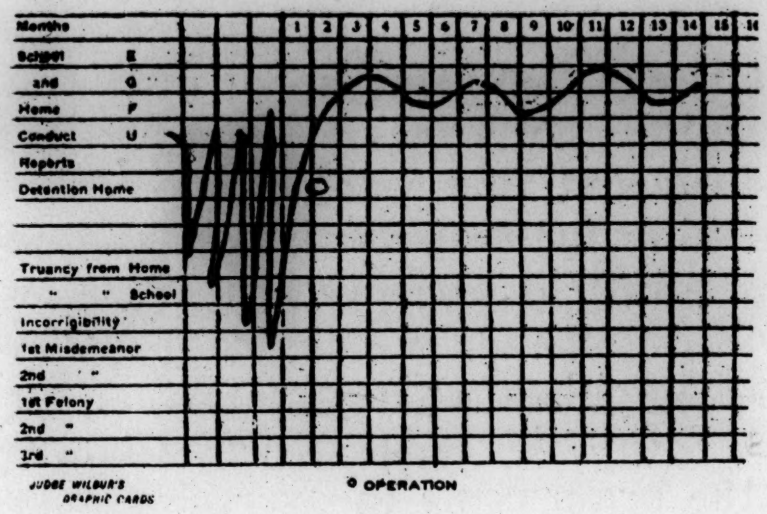
The actions of every boy are due to impulses which arise from the brain and pass over the nerve fibres. Now, let some other stimulus which is stronger and arises outside the brain come in over a sensory nerve; as, for instance, intestinal irritation, an aching tooth, a tight foreskin or some other defect, and such will predominate over those which are voluntary and arise from within, the result being that an early instinct is manifested and the boy tries to free himself. He shows the savage. The lines over which good habits have been traveling are crossed and blocked. He is irritable as a result and the carrying out of acquired habits are forgotten. His will is overruled and he does and says things that he would not otherwise have said. He becomes incorrigible, disrespectful, disobedient first at home and afterwards to the law, and finally winds up in court. So, from a theoretical point of view, it is especially important and necessary that physical defects be corrected, especially at this period. The practical point was worked out before this theory, as is shown in the following report which was read before the Southern California Medical Society in December, 1909:

> It had been reported repeatedly, during the last five years, by the judge and probation officers, and it was generally assumed, that good results followed the correction of physical defects. There was no data to prove this, except that the boys were compelled to report weekly, bi-weekly, and monthly, as the case might be, and from these reports it was thought that a marked improvement followed many operations.
>
> Being thus stimulated by the opinion of those who should know, I was led to compare my work in detail with the court records of each boy. Up to the time this classification was made, it was known that the boys improved physically, and sometimes mentally, after operations, but as to the moral change, it was not clear, as there was no positive evidence. * * *
>
> The results of this investigation demonstrated that seventy per cent of the boys who received attention showed more or less marked moral improvement. * *
>
> The records of boys are divided into groups.
>
> *First*—Boys who had appeared in court for several offenses, and who, after operations or correction of defects, improved so much in conduct that they did not have to be taken into court again, although reporting continually to the probation officer.
>
> *Second*—Same class of boys as in the first class, appearing in court on several occasions, who, after operation, improved in morals for a period, but finally, for some offense, later returned to court.
>
> *Third*—Those appearing in court only once. After receiving attention, their conduct at home and reports showed that they did well.
>
> *Fourth*—Those not doing well at first, but later doing much better.
>
> *Fifth*—Those upon whom the operation apparently had no effect from a moral point of view.
>
> In the first group we have what would ordinarily be called bad boys, who had been tried in every way, and were turned over as almost hopeless. Some had appeared in court for as many as twelve offenses. The physical defect was corrected

by operation, usually circumcision. Of the thirty boys in this group, not one since has committed an offense against the law. A record of their conduct at home and at school, which appears in the weekly, bi-weekly, or monthly reports in the probation office, shows a marked improvement in their morals.

In the second group, are boys worse than those in the first, with criminal tendencies more marked. In this class we have twenty-six, each of whom appeared in court for an average of four offenses, at an average interval of three months. After they were operated upon they improved in morals, for an average period of sixteen months each. During this time they were reporting continually, and doing fairly well. In other words, a group of boys, who were committing offenses every three months, some as often as every ten days, and whose conduct at home was not satisfactory, changed after the operation, and did not commit an offense, and did much better at home for an average period of over sixteen months each.

In the third group, as the judge says: "We are getting on to ourselves." They appeared only once, but were given attention as soon as possible, when it was necessary. In this group we have twenty boys, and not one has been brought into court for an offense since, and their reports show that they are doing fairly well.



This chart represents the stages by which a boy usually goes wrong. 1. Unsatisfactory conduct at home. 2. Truancy from home. 3. Truancy from school. 4. Incorrigibility and bad company. 5. Misdemeanor. Vertical line represents conduct. Horizontal division a time, each space a month. Diagram shows correction of a marked physical defect followed by improved moral conduct.

The fourth group includes eight who shortly after operation ran away, or committed some petty offenses, but the records show that they later improved in moral conduct.

The fifth group includes fifteen boys upon whom no good moral effect was apparent, although helped from a physical point of view. In this group we find the stigmata of degeneration more marked; three or four being apparently marked with pre-natal influence. Their tendency was to be bad, and it was born in them. They are in Whittier or Ione now.

The next question is, did the operation lengthen the periodicity of crime? This is shown in the chart on the title page,* representing thirty boys, taken from groups I and II, who have committed an average of six offenses each in the average space of time of eighteen months; that is, the time elapsing from the date of first offense to that of the last averaged eighteen months. If each appeared six times (as a matter of fact some appeared as often as sixteen or more) in a space of eighteen months, we have a periodicity of three months (as a matter of fact some appeared as often as every ten days), before the operation, while immediately following we have a break in the periodicity to seventeen months, instead of three.

The boys in the first, second, and third groups, or about seventy-five boys, showed marked moral improvement. The fifth and sixth groups, containing twenty-four boys, were not helped morally; yet the records showed marked physical and, many times, mental improvement.

Thus over sixty-eight per cent of the boys showed marked improvement morally, while fifteen to sixteen per cent showed no such improvement. These results do not include about thirty boys who were operated on during the past six months, as this short time did not seem a fair test, although a boy who has been bad in school, incorrigible at home, and a nuisance in the neighborhood, who turns over and is better, even for a month, has no doubt been benefited.

If but five per cent of those who needed attention had been helped morally, or even one in a hundred positively, instead of more than seventy in a hundred as it is, we would feel that our work was justified. (The seventy per cent helped applies to twenty-two per cent of the total who need attention, thus making about sixteen per cent in all who were benefited.)

Of course, the number of cases under investigation are not sufficient to justify our considering the conclusions drawn as absolutely correct, and this paper must be considered as a preliminary report. The investigation will well repay further observations, extending over a greater period of time, and a greater number of cases.

If any good has been accomplished in this work, and if any benefit is to be derived in the future, the credit is due the one under whose stimulus and direction everything has been done. I refer to the Hon. Curtis D. Wilbur, judge of the Juvenile Court of Los Angeles County.

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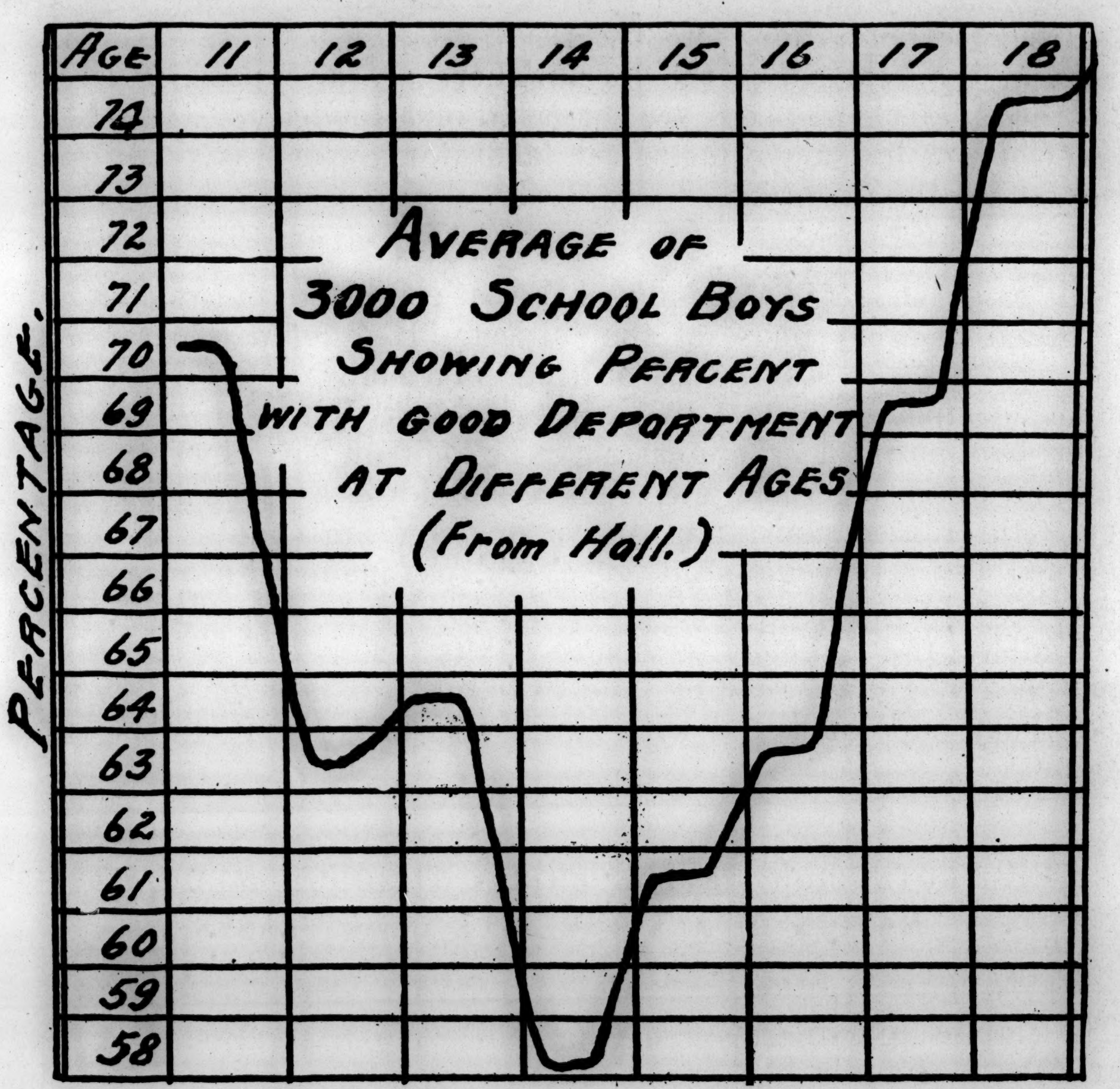
* The chart on the title page represents the periodicity of crime in thirty-one boys, each appearing in court for some offense on an average of six time each—at intervals of three months. After operation, not appearing again for over eighteen months, with more or less good report.

NECESSITY FOR THE WORK.

The above illustrates on a small scale the necessity for this work. The courts throughout the United States are being more or less forced into having a competent physician examine boys: First, by the parents. Hardly a week passes by in any court but that a mother firmly believes her boy's trouble dates from the time he was hit on the head or had some contagious disease or broke his leg. Judges receive private letters and pleadings in open court to have boys given a medical examination. Second, the judges themselves have begun to realize that they can not tell what is the matter with a boy by looking at him. In the past I have talked with many judges throughout the east and west and they have said they did not have a physical examination of all boys made because they did not believe it necessary, adding, however, that those who needed it were always examined. Judges can not tell what is the matter with a boy by looking at him more than one can tell how much money a man has in his pocket by looking at him. And they are now becoming more and more convinced of the necessity of physical examination of all boys by a competent man.



THE SYSTEM IN OTHER PLACES.

No systematic physical examination of juvenile delinquents is carried on in New York City. Only occasionally cases such as the judge thinks necessary are sent to the doctor for examination. Brooklyn is just waking up, but is a little ahead of New York. Philadelphia is ahead of both. Here each child has a superficial examination made before appearing before the judge and corrections recommended. In Boston, Judge Baker, who is elected for life, has everything in his hands. When I talked with the judge, he was inclined to think that he was able to tell when a boy needed attention, but I noticed that he spent, at least, the best part of a whole day investigating, with greatest interest, the medical side of the work in Chicago. Denver has a fair system. Most boys are now given a physical examination, and Judge Lindsey thinks it is becoming one of the most important phases of the work. At the time I talked with him, however, he did not think that all cases needed examination, and that boys' rights should be respected. Chicago has, by far, the best system in America. Every boy is given a physical examination, and the result of this is in the hands of the judge at the hearing of the case. There are also paid officers to see that these defects or needs are corrected or attended to. In addition to this, Chicago has a psychological laboratory which is doing splendid work under the direction of Dr. Healy.

THE IDEAL SYSTEM.

All cases should be examined by a competent physician who is interested in every phase of the subject. He should be supplied with good assistance, a staff of consulting physicians, or specialists, statisticians, competent people to investigate and follow up cases. There should be a hospital, where cases can be kept under observation, dentist chair, an operating room, etc. There should be a psychological laboratory with trained assistants. Boys in detention should be constantly occupied and a personal study of every case made with an endeavor to create certain impulses over nerve tracks which will tend to supplant or eliminate the tendency to vicious habits. This can be accomplished, sometimes by games, reading, and example, but most of all by keeping a boy busy and interested with hands and body, daily to the point of fatigue.

II. THE PROTECTION OF THE PUBLIC THROUGH MEDICAL EXAMINATION OF ALL JUVENILE COURT CASES.

By Dr. Annie G. Lyle, Physician to the Juvenile Court of San Francisco.

The public announcement of the California State Board of Health, that "the communicable diseases due to syphilis and gonococcus infections are among the most prevalent and most harmful known to medical science," is amply borne out by the following report, which has been prepared at the request of its president and secretary. The juvenile court is in a peculiarly favorable position to see much of the spread and the results of these diseases and to handle cases of infection among those boys and girls brought before it. This should be done in a masterly way for the eventual cure and the best interests of the child, especially when the child is placed on probation to the court.

With the exception of the cases of hereditary syphilis (3 or 4), and a few chronic cases (4 or 5), all the cases seen by me have been acute cases, amenable to treatment, with a possible prognosis of complete cure in most of the cases.

This report covers the number of cases seen by me since the passage of the new juvenile court law, April, 1909, to November, 1910.

In that time about 3,419 cases have come under the jurisdiction of the court, 1,619 delinquent cases and 1,800 dependent cases. Owing to the limited machinery and to lack of legislative enactment, I have come in contact with only 491 cases, or about one seventh of the total number of cases that have passed through the court during this time; 312 of these being delinquent, and 179 dependent cases; so that 2,900 children have passed through the court with no medical examination whatever from April, 1909, to November, 1910. If the percentages of diseases of the 2,900 who have had no medical examination compare at all with the percentage of diseases of those whom a medical examination shows to be afflicted, it is self-evident that some remedial measures should be taken at once.

I have divided the children into two great groups, dependent and delinquent. Among the 179 dependent children I find only 4 venereal cases—a little over 2 per cent.

Among the 312 delinquent children I find 78 venereal cases—25 per cent—a strong and most instructive contrast between the two groups of children, showing that the dependent and delinquent children should be separately handled and dealt with in the detention home of the juvenile court. Not only as a preventive of physical contamination, but of moral contamination as well. The ages of these children afflicted with venereal disease vary from 12 to 19; most of the cases occurring between the ages of 15 and 17.

Among the delinquent cases I find 40 cases of other infectious diseases—12 per cent.

Among the dependent children I find 35 cases of other infectious diseases—10 per cent. These cases are usually controlled, although there have been some instances of tubercular cases and of contagious cases having been placed without reference to the diagnosis.

Among both delinquent and dependent children I have recorded 184 cases of teeth needing attention. A few of the children were sent to the dental clinic, but I was able to find only one instance of such procedure in the official court records.

Among the delinquent and dependent children, 217 cases of tonsils and adenoids needing operations, with 72 operations performed, are recorded. There were 46 surgical operations necessary to be performed, of which 30 were done.

I beg leave to call your attention to the following law:

> Section 27 of the act of March 8, 1909 (Statutes 1909, page 213), creating the juvenile court law, provides: "*That the care, custody and discipline of a child shall approximate* as nearly as may be *that which may be given by his parents*, and in all cases where it can be properly done, *the child shall be placed in an approved* family, with the people of the same religious belief, *and become a member of the family, by legal adoption or otherwise.*"

In this act we have a law ordering that the child shall be placed in an approved family when necessary, but there is no provision by law for the protection of these innocent families against receiving children with venereal or infectious diseases into their homes without notification. Unaware of the dangers, the probation officers have in many instances been placing communicable and venereal diseases in approved families and institutions without notification. Both dependent and delinquent children have found their way into private families and institutions. Such children are a great menace either in a home or in an institution, spreading these diseases in many ways, by towels, laundry, social salutations, *et cetera.*

There is no provision by law for a physician to the juvenile court. At present the physician to the court has no legal status, holding the position by grace of appointment by the committee.

The committee of the juvenile court, realizing the importance of medical care for the children, appointed me physician to the juvenile court shortly after the institution was started. I have served the committee in the capacity of physician to the juvenile court without compensation for nearly seven years.

In the handling of these cases I have been ably assisted and most generously helped by Dr. James A. Black and Dr. David Stafford, and occasionally by other leading physicians and surgeons whom I have sometimes called on for help.

Dr. Stafford has examined and treated all boys over 14 years of age. Dr. Stafford has reported 36 cases of venereal diseases, seen in most instances only once and not brought back to him for further medical treatment, as ordered.

We are likewise indebted to Dr. Millberry of the University of California Hospital, who, at my request, was kind enough to promise to take care of the teeth of the children passing through the juvenile court. This privilege has been extended to the court children for over a year.

In conclusion, I suggest additional legislation for meeting the omission of the present legislative acts and for meeting the necessities of the child.

I would suggest the amending of the juvenile court act, in order that a duly qualified and competent physician be selected, whose duty it shall be to make a physical examination of all the children who come under the jurisdiction of the juvenile court, and that the physician to the court be given absolute jurisdiction of the physical condition of the child, and be held accountable for the child's health. That the physician shall make a written report on each case, and a copy be filed with the judge, containing a statement of the condition of the child's health and a recommendation of treatment.

(2) That all probation officers shall be empowered, and compelled, to bring all children passing through the court to the physician, for physical examination, and that, when necessary, such children be kept under the doctor's care until given a certificate by the physician, in order to avoid instances of venereal and infectious cases being placed in approved and innocent families.

(3) That no child from this court shall be sent to an approved family, institution, or into any occupation, without a certificate from the physician that the child is not suffering from any incurable, infectious, or notifiable disease.

If it has been deemed necessary for a medical examination to be made of all public school children, the importance of examining all the children that pass through the juvenile court can not be overestimated.

The law provides ample redemption for the child, morally, in the many institutions which it sustains, but the law does not provide for the child's physical redemption. The juvenile court may make of a boy or a girl everything that could be desired morally, but the child can never be a useful member of society if he be permitted to go untreated for diseases that are in many instances worse than death itself, and which render him a physical and sometimes mental wreck. The question of primal importance for the juvenile courts of this country: "Is it well with the child?" should be answered in every case, and should be the basis of all intelligent and progressive work in behalf of the child's welfare.

In this report, I have been greatly indebted to the valuable assistance rendered me by Mr. R. O. Young, assistant probation officer of the juvenile court, without whose accurate help in going over about two thousand court records, and the necessary statistical data, this report could not have been assembled.

The following table gives the detailed figures upon which this paper is based:

Medical Report of San Francisco Juvenile Court Cases from April, 1909, to November, 1910.

	Venereal.	Gonorrhœa.	Syphilis.	Venereal—not specified whether gonorrhœa or syphilis.	Cured.	Not brought back for further treatment, as ordered.
Delinquent April, 1909-April, 1910	43	28	11	5	2	46
Delinquent April, 1910-Nov., 1910	35	23	8	4	2	33
Dependent April, 1909-April, 1910	4	3	1	0	1	3
Dependent April, 1910-Nov., 1910	0	0	0	0	0	0
Total	82	Venereal cases.				
	11	Venereal cases not examined or treated by any doctor or reported on by probation officer.				
	71	Venereal cases examined and reported by Dr. Lyle and Dr. Stafford.				
	5	Venereal cases cured.				
Untreated or insufficiently treated. Uncured.	66	Venereal cases (with few exceptions) placed by probation officers without reference to diagnosis.				

Medical Report of San Francisco Juvenile Court Cases from April, 1909, to November, 1910—Continued.

	Tuberculosis.	Infectious diseases.	Treated.	Bad teeth recorded.	Teeth not attended to.	Tonsils and adenoids.
Delinquent April, 1909-April, 1910	5	22	22	70	69	79
Delinquent April, 1910-November, 1910	0	17	17	47	47	42
Dependent April, 1909-April, 1910	5	37	35	50	50	82
Dependent April, 1910-November, 1910	0	8	8	17	17	14

Medical Report of San Francisco Juvenile Court Cases from April, 1909, to November, 1910—Continued.

				Court records.		
	Operated tonsils and adenoids.	Other surgical operations.	Surgery necessary but not done.	Of delinquency cases containing medical reports made by probation officer.	Of delinquency cases not containing medical reports made by probation officer.	Total number of cases examined by Dr. Lyle.
Delinquent April, 1909-April, 1910	23	16	25	80	1,050	206
Delinquent April, 1910-Nov., 1910	5	4	7	32	569	106
Dependent April, 1909-April, 1910	44	10	13	Court records of dependent cases not gone over. (Approximate.)		151
Dependent April, 1910-Nov., 1910	0	0	1		1,800	28
Total					3,419	491

ANNIE G. LYLE, M.D.,
December 23, 1910. Physician to the Juvenile Court of San Francisco.

HOOKWORM DISEASE IN THE MINES OF CALIFORNIA.*

By HERBERT GUNN, M.D., Special Inspector, California State Board of Health.

Attention was first drawn to the occurrence of hookworm disease in the mines of Jackson, Amador County, by Dr. F. F. Sprague, and later by Dr. E. E. Endicott. Both of these physicians believed that the infection occurred in the adjacent mines, but, as the cases observed were all either in persons who had been exposed to infection in other parts of the world, or in foreigners of not many years residence here—Italians, Austrians or Cornishmen,—many of whom we know are infected with hookworm before coming to this country, it was necessary to obtain more conclusive evidence, before it could be considered that the disease had gained a foothold in California. Further, the fact that the disease has not been reported as originating in any mines in the United States, made it appear that we were dealing with imported cases only.

In order to prove, conclusively, that the disease occurred endemically in a mine, it would be necessary to demonstrate the larvæ in the soil from the workings, or to find the disease in a person who had not been exposed to infection elsewhere for at least seven years, and, preferably, ten years. On account of the wandering habits of many of the miners, and the very small number of Americans employed, very few men were available for the purpose of such investigation.

In Mine No. 1, the results were as follows:

No. 1.—F. Native of California, never out of this State; health good, except for occasional attacks of abdominal pain, due, it was believed, to chronic appendicitis. Ova hookworm present. Blood shows eosinophilia 15 per cent.

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* The names of the mines infected have been omitted, and the three mines examined by Dr. Gunn are designated numbers one, two, and three. While a portion of this article is technical, and intended for practitioners of medicine, a large part of it will be easily understood by the layman.—EDITOR.

No. 2.—M. Native of California; never out of State. Has been mining for just two years only, and has, during that time, always been employed in this mine. Health good. Ova hookworm present. Eosinophilia 13 per cent.

No. 3.—K. Nativity? Not out of California during past forty-eight years. Resident of Jackson for the past seventeen years. Health good, excepting for eruption on leg, extending over considerable surface, (a typical ground itch). Ova hookworm present. Eosinophilia 12 per cent.

No. 4.—N. Nativity? Resident of California for 25 years. Employed in this mine for fifteen years. Stated that health has not been good for some time. Shows evidence of moderate anæmia. Ova hookworm present in feces. Blood not examined.

No. 5—L. Nativity? England. Nine years in Jackson. Health, he states, is excellent, but there is quite an apparent anæmia. Ova hookworm present. Eosinophilia 5 per cent.

No. 6—F. Italian. Eight years in California. Five years in Jackson. Unable to work for past 5 months, on account of weakness. Ova hookworm present. Eosinophilia 12 per cent.

Specimens of earth were taken from various parts of this mine, where conditions of heat and moisture were suitable for the development of the parasite, and, in one, hookworm embryos were demonstrated.

In Mine No. 2, it was impossible to obtain feces for examination. Larvæ of hookworm were demonstrated in specimens of soil taken from the workings.

In Mine No. 3, several cases were found, but none had been in California a sufficient number of years to be of any positive value, for the purpose of this investigation. No examination made of the workings of the mine.

Extent of infection.—The men were looked over in Mine 1 and 2, after they had finished work and were bathing and changing their clothes. Evidence of the disease was everywhere to be seen. The peculiar color of the face, which is so often found in this disease, even where the blood shows but slight reduction in the hemaglobin, was observed quite generally. Quite a number showed moderate anæmia, while occasionally it was quite pronounced. It should be borne in mind, that we are now considering only those men who were able to work,—those so ill that they were unable to work, will be referred to later. Several cases of ground itch were observed, the arms and hands being the most frequently affected parts.

On account of the difficulties in obtaining a sufficient number of stools to form an estimate of the percentage of infected persons in the mines, blood smears were taken, and the eosinophiles counted, with the following results:

Mine No. 1.—Specimens from eighteen miners. Some men selected who showed evidence of disease. In all examinations, 100 cells were counted, and Wright's stain, or Oliver's modification of it, were used.

		Per cent.
1	Eosinophilia	13
2	Eosinophilia	24
3	Eosinophilia	17
4	Eosinophilia	12
5	Eosinophilia	18
6	Eosinophilia	7
7	Eosinophilia	15
8	Eosinophilia	13
9	Eosinophilia	5
10	Eosinophilia	13
11	Eosinophilia	21
12	Eosinophilia	9
13	Eosinophilia	10
14	Eosinophilia	18
15	Eosinophilia	3
16	Eosinophilia	20
17	Eosinophilia	11
18	Eosinophilia	12

Number nine was referred to, previously, as an infected case, with nine years residence in Jackson, so that the probabilities are that all of the eighteen are infected, excepting possibly Number fifteen,—with an eosinophilia of 3 per cent. Stools were also obtained from the following, on this list, and all contained ova of hookworm: numbers four, seven, eight, twenty.

Feces from eight individuals, in this mine, showed seven positive. The negative stool came from an assayer whose work, until comparatively recently, had been entirely above ground. The infection in this mine, it would appear, is close to 90 per cent.

Mine No. 2.—Men showing evidences of the disease were, in some cases, selected.

		Per cent.
1	Eosinophilia	8
2	Eosinophilia	3
3	Eosinophilia	0
4	Eosinophilia	6
5	Eosinophilia	5
6	Eosinophilia	2
7	Eosinophilia	3
8	Eosinophilia	4
9	Eosinophilia	7
10	Eosinophilia	8
11	Eosinophilia	4
12	Eosinophilia	24
13	Eosinophilia	8
14	Eosinophilia	15

It was impossible to obtain stools from any on this list. The conditions in this mine were very good, there being less moisture throughout most of the workings than in the other mines. Yet, from the appearance of the blood, ten out of the fourteen examined, or 70 per cent, should be looked upon with suspicion.

Mine No. 3.—Blood was taken from the first eleven men who happened along. No selection was made in any case, with the following result:

		Per cent.
1	Eosinophilia	5
2	Eosinophilia	11
3	Eosinophilia	7
4	Eosinophilia	14
5	Eosinophilia	6
6	Eosinophilia	14
7	Eosinophilia	20
8	Eosinophilia	14
9	Eosinophilia	0
10	Eosinophilia	15
11	Eosinophilia	5

Here, it would appear that all but one are infected, or over 90 per cent. In number ten, and number eleven, the only ones on this list from whom stools could be obtained, ova of hookworm were found present. Of course, it should be remembered in considering the increase in the eosinophiles, that such might be due to infection with other parasites, but, in the examinations of all the stools that could be obtained, evidence of other parasites was generally lacking. In one case *Strongyloides intestinalis* was present, and, in another, *Trichocephalus dispar.*

CONDITIONS IN THE MINES RELATIVE TO DEVELOPMENT OF THE DISEASE.

First—*Temperature.* It has been shown that, in mines with a temperature below 70 degrees Fahr., the disease makes but little headway. In the mines of Jackson, in portions where the men are working, the temperature is usually kept, by forced draft, below 70 degrees Fahr., but in abandoned portions, and adjacent cross cuts, the only places where a man would be likely to deposit his excrement, the temperature was often as high as 80 degrees or 90 degrees Fahr.

Second—*Moisture.* A sufficient amount of moisture was found in portions of all of the levels visited.

Third—*Disposal of excrement.* Although there are rules in force against the contaminating of the workings with feces, it was not very difficult to find evidence that these rules had been broken. The arrangement, for the use of the men, of tanks in the shafts, is open to criticism, and is believed to be one of the modes of infection.

ECONOMIC ASPECTS.

There is no question, that the general efficiency of the men is noticeably impaired. At one mine, employing about 300 laborers, it was stated that a reserve of about twenty-five men had to be available to replace those, who, on account of sickness, did not appear for work. Quite a few of the men have to lay off, every now and again, to recuperate. Several who were unable to work, stated that when they arrived in Jackson they were perfectly strong and well. A large number of these men were encountered on the streets, some of them presenting marked degrees of anæmia.

The greatest loss to the mine operators, is occasioned by the large number of those moderately affected. In one mine, a superintendent who was infected, ascribed his somewhat poor physical condition to the results of an illness which occurred a couple of years ago. Another man, occupying a responsible position, had to be given a vacation every now and then, on account of declining health. He presented a quite noticeable anæmia, and on examination of the stools, showed a heavy infection. Any number of similar cases could be cited, but these examples should be sufficient to show, very clearly, that the average miner infected with hookworm can not do the work of a normal man. A loss of 20 per cent in the efficiency of those infected, would be a conservative estimate. That would mean, in mine No. 2, for instance, where over three hundred men are employed, at an average of about $2.50 per day, and estimating the number of those infected as low as 50 per cent, a loss of over $20,000 a year.

When it is remembered that nearly 30 per cent of all deaths in Porto Rico, are due to hookworm disease, it is safe to say that, directly and indirectly, many have died from the infection contracted in these mines.

The danger of the disease being spread in the neighboring valley, should be considered, especially as the sanitary arrangements for the disposal of sewage, in the town of Jackson, are very poor, and as many of the infected miners, who are too ill to work in the mines, live on near by farms until recuperated.

The extent of infection throughout the gold mines of California, can very readily be estimated. The conditions of heat and moisture, necessary for the development of the larvæ, are more or less the same in all of the mines, and all employ the same class of labor. It is believed, that it will be found that all of the mines of California are more or less infected, and that, probably, conditions will approximate those found in Jackson. The same statement can be made for Virginia City, Nevada. While the mines of Sutter Creek, near Jackson, were not visited, cases which undoubtedly were contracted there, were seen. The origin of the infection of the California mines, undoubtedly extends back many years. It was probably introduced by laborers from Cornwall, Austria, or Italy, in which countries the disease occurs extensively in the mines.

It may be stated in summary:

1. That hookworm disease is endemic in certain mines of California.
2. That from 50 per cent to 80 per cent of those working in these mines are infected.
3. That the infection undoubtedly is present in practically all of the gold mines of California, and in those just over the border of Nevada.

THE CONTROL OF HOOKWORM DISEASE.

The writer begs to suggest that the State Board of Health make an examination of every mine within the State in order to demonstrate if these mines are infected or not, and, if infected, the extent of infection. This is necessary, for it is practically impossible to force the mine owners to institute such an investigation, and, what is more, there are few physicians who have a sufficient understanding of the hookworm problem to make such an investigation. It is also most important that a campaign of education be undertaken by the State Board of Health in order to inform the laity as to hookworm disease in general, with special reference to its economic aspects, and as to the status of hookworm disease in the mines of other countries, and the steps which have been taken there to eradicate it.

REGULATIONS BY THE STATE BOARD OF HEALTH.

The writer would further suggest that stringent regulations be passed, by the State Board of Health, as to the treatment of those already infected within mines; also, as to the reëxamination and retreatment, at short intervals, of those working within infected mines, and a thorough examination of all applicants for work, before employment, in order to demonstrate if they are free from this disease. Regulations are also necessary as to the proper sanitation of mines, and all mines should be required to dispose of the excreta in a thorough manner; to institute measures to free the soil from hookworm infection, and to protect the skin of the workmen against such infection. Furthermore, hookworm should be a reportable disease, and not only the persons afflicted should be known to the State Board of Health, but the manner of their treatment, results, etc.

In conclusion, the writer begs to acknowledge the great assistance which was rendered by Dr. Endicott, County Health Officer. He also wishes to thank the mine operators, as they aided, every way in their power, in this investigation.

RABIES AND THE NEED FOR A PASTEUR INSTITUTE.

By Dr. W. A. Sawyer, Director State Hygienic Laboratory.

The increasing prevalence of rabies in California, and the insufficient provisions for the treatment of persons bitten by rabid animals, leads me to bring before you the following considerations, regarding the establishment of a Pasteur Institute by the California State Board of Health.

If it should become necessary to establish, in California, a Pasteur Institute for the treatment of persons bitten by rabid animals, it seems wiser that such an institution should be a part of the State Hygienic Laboratory than that it should be organized by private individuals on a commercial basis. There is great advantage in having diagnoses made, and the treatments given, by the same institution; and such an institution should be under state control.

If a Pasteur institute is not established in California, the treatment of persons bitten by rabid dogs must depend on the United States Public Health and Marine Hospital Service, for the shipment of virus, or the patient must be sent to a Pasteur Institute as far away as the institute at Chicago, St. Louis, Austin (Texas), Minneapolis (University of Minnesota), Madison (University of Wisconsin), or Ann Arbor (University of Michigan). In case the virus is procured from Washington, by telegraphing to the Surgeon General of the United States Public Health and Marine Hospital Service, who sends the virus by mail and special delivery, a delay of at least six days is necessitated. The boy now being treated in Berkeley, was bitten in the afternoon of October 25, the dog's head was received at the State Hygienic Laboratory on October 26, the results were reported and the virus telegraphed for on October 27. It was 10 a. m., November 3, when the arrival of the virus permitted the starting of the treatment. Fortunately, the wound was small, and on an extremity, otherwise this delay might have been serious.

When the diagnosis depends on the death of the diseased animal, two or three days after the biting, or on inocculations made from the brain of a dog which had been killed at the time of the biting, before the Negri bodies have developed sufficiently to be detected, the week's delay of sending to Washington for virus, or the shorter loss of time due to sending the patient to an institution in the Middle West, might render the treatment futile.

The present situation seems to warrant the establishment of a Pasteur institute on the Pacific coast. The location of the State Hygienic Laboratory at Berkeley is sufficiently central for it to do the work for California, and, if necessary, for neighboring states. The presence of the laboratory at the State University would give the director of the Hygienic Laboratory the opportunity of freely consulting, in regard to the scientific problems of a Pasteur institute, with the scientists at the University of California. The newly appointed professor of pathology, Dr. Frederick P. Gay, recently instructor in Harvard University, has made a specialty of research on immunity, and, therefore, he is familiar with the scientific basis of the Pasteur treatment. The enclosed letter gives his opinions regarding the advisability of establishing a Pasteur institute at the State Hygienic Laboratory. Dr. C. B. McGlumphy, the assistant in the State Hygienic Laboratory, was called here from the Pasteur institute at the University of Michigan, where he carried on the routine production of the virus, and the treatment of the patients. He is prepared to do the same work at the State Laboratory.

The necessary increase in the expenses of the State Hygienic Laboratory would not be great, and could be in part defrayed by the fees of patients. In Michigan, residents of the state are charged twenty-five dollars, while patients from the outside pay one hundred dollars. These fees are sufficient to support the institute. I would suggest that, in California, there should be at first a fee of fifty dollars for residents of the State, and one hundred dollars for outsiders. The work of such an institute would increase the work of the laboratory and would soon necessitate the services of another assistant. But the immediate expense would be the purchase of only a small increase in equipment, including jars for the drying cords, shelves for these jars, and a suitable pine treatment table. In the building which contains the State Hygienic Laboratory, the additional space necessary for the Pasteur institute would be temporarily granted by Dr. Gay.

During the last two days I have received three letters which are pertinent to the question of establishing a Pasteur institute as a department of the Hygienic Laboratory. The first is from Dr. J. W. Kerr, Assistant Surgeon General of the United States Public Health and Marine Hospital Service. He reports that antirabic virus for 92 cases has been furnished to the State Board of Health of California, during the last eleven months. This means an average of 8.4 cases per month. At this rate there would be 100 cases in a year. At a fee of fifty dollars each, this number of cases would support a Pasteur institute. Undoubtedly, a private institution will soon be started, if the State does not enter the field first. The free United States government virus is now being given by physicians, at a cost of twenty-five to seventy-five dollars for the treatment. The State can give treatments, with fresher virus, at a lower cost, and with a saving of a week of delay. The responsibility for the delay in beginning is a serious one, and is certain, sooner or later, to mean loss of human life.

A letter from Dr. Novy, of Ann Arbor, states that an allowance of two thousand five hundred dollars is made for the Pasteur institute in Michigan. I have heard, indirectly, that the patients' fees cover the actual expense.

The letter from Dr. Westbrook, director of the laboratories of the Minnesota State Board of Health, states that the Pasteur institute, although located at the University of Minnesota, is a part of the laboratory division of the State Board of Health, and the general laboratory fund is thirteen thousand dollars per annum, with an additional three thousand for branch laboratories.

The three letters are copied below, together with Dr. Gay's interesting summary:

TREASURY DEPARTMENT,
BUREAU OF PUBLIC HEALTH AND MARINE HOSPITAL SERVICE.

WASHINGRON, November 15, 1910.

Dr. W. A. Sawyer, Director State Hygienic Laboratory, Berkeley, Cal.

DEAR DOCTOR: The Bureau is in receipt of your communication of the 4th instant, acknowledging the receipt of antirabic virus, and requesting to be informed as to the number of Pasteur treatments sent to the State of California, up to date. In reply, you are informed that 92 treatments have been furnished to the State Board of Health of California, during the last eleven months. There is enclosed, herewith, a public health bulletin entitled, "The Prevalence of Rabies in the United States," and on page 13 will be found a list of the Pasteur Institutes, and those under the direct supervision of state boards of health.

By direction of the Surgeon General,

Respectfully,

J. W. KERR,
Assistant Surgeon General.

UNIVERSITY OF MICHIGAN,
ANN ARBOR.

November 14, 1910.

Dr. W. A. Sawyer, California State Hygienic Laboratory, Berkeley, Cal.

DEAR DOCTOR: Acknowledging your inquiry of November 7, I beg to say that the Pasteur Institute is a department of the Hygienic Laboratory of the University of Michigan. The University furnishes all the funds needed for the work. The exact amount I cannot give, for the reason that animals' keep, and general supplies, are all included in the Hygienic Laboratory budget. The actual amount allowed is $2,500, including salaries.

Trusting that this information meets your wishes, I am

Very truly yours,

(Signed) R. NOVY.

LABORATORIES, MINNESOTA STATE BOARD OF HEALTH
(UNIVERSITY OF MINNESOTA),

MINNEAPOLIS, Minn., November 16, 1910.

W. A. Sawyer, Esq., Director State Hygienic Laboratory, Berkeley, California.

DEAR SIR: Answering yours of November 8th, I have to say that the Pasteur Institute, although located at the University of Minnesota, is a part of the Laboratory Division of the State Board of Health. It is provided for by a state appropriation of $7,500 per annum. The general laboratory fund of the State Board of Health is $13,000 per annum. There is another fund for branch laboratories of $3,000 per annum. The branch laboratory at Duluth is supported by the above funds, and St. Louis County and the city of Duluth each contribute $600 per annum, or a total of $1,200 per annum, in addition. We had a special fund also for embalming fluids, which is now exhausted. Our total appropriation for the State Board of Health Laboratory is, therefore, $24,700 per annum.

These appropriations expire at the end of this biennial period, and it is possible that the State Board of Health will endeavor, this year, to get a lump sum appropriation. I am not in a position to say whether this will be feasible and, if feasible, whether it is altogether desirable. It allows very much more latitude, it is true, but if a large appropriation is obtained, and the Board is saddled by law with the administration of certain problems which call for appropriation from its funds, in addition to funds which are provided by the locality, the extreme activity of localities might deplete the State Board of Health treasury, to such an extent that other branches of the work would suffer. To illustrate: If tuberculosis sanatoria are built by localities, under a provision of law which compels the State Board of Health to give a certain per cent of the total amount, and if, at the same time, the State Board of Health laboratories, engineering division, or other branches of the work, are unprovided with specific funds, it might result in the crippling of the work over which the Board has control, at the expense of the work over which it has only partial control. This does not obtain if the funds are plentiful enough.

Yours very truly,

(Signed) F. F. WESBROOK, Director.

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Yours very truly,

(Signed) F. F. WESBROOK, Director.

UNIVERSITY OF CALIFORNIA.

DEPARTMENT OF PATHOLOGY,
BERKELEY, November 1, 1910.

Dr. W. A. Sawyer, State Hygienic Laboratory.

DEAR DR. SAWYER: It gives me great pleasure to comply with your request for my opinion in reference to the advisability of establishing a local Pasteur Institute for the treatment of rabies. As you doubtless know, we, in this country, have been extremely negligent in taking active measures for the suppression of this serious malady, which is now epidemic in many parts of the United States, whereas in Europe, every country, and nearly every city of considerable size, has its institute for the preventive treatment of individuals who have been bitten by rabid dogs, where every adequate means for preventing the spread of the disease is taken.

Muzzling laws are, of course, imperative, and, if rigorously enforced, will eventually suppress the disease. But, experience has shown in Europe that it is almost impossible to enforce them throughly. For many years, the few cases in this country were treated at private institutions, at a cost of a hundred dollars or more to the patient, in addition to the expense of a considerable journey to the locality in which such an institution was situated. Some years ago, the New York Health Board established a Pasteur Laboratory, and many cases were treated directly, or indirectly, by this Board. A short time ago, the Marine Hospital Service in Washington also established a laboratory, which fact impresses, on the thoughtful mind, the prevalence of the disease, and the importance of active measures to suppress it.

The Public Health and Marine Hospital in Washington is, I understand, willing to supply virus, and to send it to any part of the country, when the request is made through a Board of Health, and in most parts of the country this method of treatment is the only one which is feasible at the present time, short of an expensive and time-consuming journey to Washington.

The Government, however, has never intended, I am told unofficially by Dr. Rosenau, late Director of the Marine Hospital Laboratory, to supply the entire country for an indefinite period, and certainly not for any considerable period, in view of the marked increase in the disease. The governmental idea has been simply to standardize the method of treatment, and impress the country with the importance of the disease. It seems, therefore, imperative from the point of supply, that state laboratories should provide themselves with their own weapons for combating rabies. It is certain that, at any moment, it may be impossible for the Government to meet the demands from various parts of the country.

A second question, of still greater importance, lies in the material itself, as it is now supplied by the Washington Laboratory. In the first place, a necessary delay of from four to five days, at least, must be counted on before the virus can be obtained from Washington. As you well know, the success of the Pasteur inoculation for rabies depends, directly, on the treatment beginning as soon as possible after the bite of a rabid animal. At the Pasteur Institute in Paris, cases are not accepted for treatment after 21 days, and the sooner the case is treated, the more certain is the cure, so that a delay of five days, in waiting for the means of treatment, is a serious one. Let us suppose, for example, that through some negligence, or other reason, the patient did not present himself to you for treatment until two weeks after having been bitten. If you are obliged to wait another five days for the means of treatment, the possibility of saving that individual's life would be extremely problematical.

Virus which is sent through the mails, although supposedly protected from contamination, by glycerine, is by no means so advisable for use in the treatment of cases, as virus which has been prepared on the spot by the individual who administers the treatment. It is particularly advantageous for the one who treats cases to have material which he has prepared himself, and concerning the virulence of which he has himself made the determinations.

It seems, then, to me, highly desirable, not to say essential, that each State Board of Health, and particularly one so remote from the source of supply as the State Board of Health of California, should provide itself with the nucleus of a Pasteur Institute for the treatment of sporadic cases of rabies which may occur within the State, and in order to forestall any sudden epidemic for which it might be impossible to secure any virus at all.

Very truly yours,

FREDERICK P. GAY.

SMALLPOX AND THE PRESENT VACCINATION LAW.

By William F. Snow, Secretary.

The operation of the present vaccination law is probably responsible for the scarcity of smallpox in California. There is no other epidemiological factor which explains why smallpox has reached its present low ebb, in number of cases and deaths. On the other hand, the present law is not satisfactory, either to the health officer or to the citizen who fears vaccination. The health officer finds fault, because he has no authority to enforce this measure, except by persuading the local school trustees that they should enforce it in the public schools; the school trustees find this an unwelcome duty, and foreign to their regular work of school administration; many parents are opposed to it, either because they are advised that their children are not well enough to be safely vaccinated, or because they doubt the protective value of the process, and fear complications with other dangerous diseases.

There exists, in California, an Anti-Compulsory Vaccination League, which proposes to introduce a bill repealing the present law, or at least its compulsory features. This will, no doubt, be vigorously opposed by those who have had experience with smallpox.

The teachers of California are rightly concerned in this impending struggle for the maintenance, or repeal, of the law. Unavoidably, the brunt of the opposition and friction developed in its enforcement, has fallen on the shoulders of the teacher. This should be remedied. The California Teachers' Association, in convention, this month adopted the following resolutions, as voicing their opinions as to a feasible and effective vaccination law:

Whereas, The present vaccination law places a great burden upon the boards of trustees of the school districts of California; and

Whereas, Enforcement of its provisions in the public schools of California produces much friction between teachers and parents, without accomplishing the full intent of the law; and

Whereas, There has now been developed a sufficiently strong system of county and city health officers to take charge of protecting the state from the inroads of smallpox, therefore, be it

Resolved, That the California Teachers' Association endorse the repeal of the general vaccination law, approved February 20, 1889, and the enactment of a new law to encourage general vaccination in the State of California, as outlined in the paper upon vaccination presented before the section of county boards. In principle, this proposed new law provides for:

1. General vaccination.
2. For the transference of its enforcement from boards of school trustees to the health officers of the state.
3. For its extension to all schools, public and private.
4. For an alternative clause, under which children of parents who object to vaccination may continue in school, in the absence of smallpox in the district.
5. For the withdrawal from school, of all unvaccinated children and persons, upon the filing with the teacher, or other school authorities, of a statement by the health officer that smallpox exists in the district, and a presentation of an official list of those persons who are to be excluded; this withdrawal to be operative until smallpox no longer exists in the district.
6. For a penalty clause making the violation of this law a misdemeanor punishable, upon conviction, by a fine of not less than twenty-five (25) dollars, or more than three hundred (300) dollars, or by imprisonment for a period of not more than thirty (30) days, or by both fine and imprisonment.

The compromise principles herein outlined have been discussed, also, by both the anti-vaccination and the pro-vaccination advocates. The members of the 1911 legislature have probably all informed themselves upon the situation.

SMALLPOX AND THE PRESENT VACCINATION LAW.

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The State Board of Health has made no plan for action, other than to aid all alike, vaccinationist and anti-vaccinationist, to obtain authentic facts and figures and to express itself in favor of any legislation which will render vaccination more efficient, and will relieve the schools from any friction in connection with its administration.

A PROPSOSED ENGINEERING DEPARTMENT FOR THE STATE BOARD OF HEALTH.

By Ned D. Baker, Engineer Inspector, State Board of Health.

The California State Board of Health is constantly receiving requests from individuals and small communities of the State, for advice in matters of sanitary engineering. The Board has been forced for some time to act in an advisory capacity in matters of this kind, and the question now arises, shall the State Board of Health be equipped with a Division of Sanitary Engineering to properly answer such inquiries, and to furnish preliminary engineering advice along sanitary lines? In attempting to suggest an answer to this question, we should study it from the standpoints of:

(1) The need for an engineering department in the work of the State Board of Health;

(2) The advisability, and fitness, of having such a department in the Board's organization;

(3) And the kind of work to be undertaken by such a department.

Need.—In commenting on this subject in the January number of the Bulletin of the New York State Department of Health, Mr. Theodore Horton, Chief Engineer for the Department, says:

> "If we had the opportunity to review the sanitary history of all our civilized communities, we should undoubtedly be surprised to find how similar the experience of each has been; how nearly every one has had to face the same problems which concern public health—especially the problem of disposal of domestic and municipal wastes."
>
> "In most cases, these communities have at times, unfortunately, through lack of knowledge and experience of their own, or of other communities, or through their failure to seek the advice of some central authority such as the State Department of Health, attempted to solve the problems without due regard to proper sanitary principles."

This applies to larger communities as well as to small ones, and we might as well apply it to California as a State. Several of the older States have passed through that period in their sanitary history in which our State now finds herself. The same reasons that made necessary the establishing of sanitary engineering departments in the State health departments of Massachusetts, New York, Ohio, New Jersey, and Pennsylvania, some years ago, are operating now in California. The departments established in those states have been an unquestioned success, and have brought large returns.

Communities are rapidly developing all over the State, and are establishing their sanitary conveniences, sometimes without due regard for their own health, and quite frequently without due regard for the good health of other communities. There is, certainly, a need for some central guiding authority, such as would be exercised by the State Board of Health through its Sanitary Engineering Department.

The smaller communities of the State, attempting, for the first time in their history, to install sanitary systems, are handicapped by lack of

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experience of their own, and by poor access to the experience of others. In this connection, there is need for a state officer, specially trained in this line of work, to confer with and advise the authorities of the smaller communities. There should be no necessity for the Board to furnish these communities with engineering services, other than general advice and outlining of policies. The need of a uniform policy in such matters, is self-evident.

Fitness.—The control and prevention of typhoid fever and other water-borne diseases, are essentially problems in sanitary engineering. The work is almost wholly one of preventing and regulating the pollution of water supplies, and the purification of supplies that are dangerously polluted. The California laws on this subject are all negative. They tell the communities what they shall *not* do. If the existing evils of stream pollution in California are to be remedied, these communities must have some one to whom they can look to find out what they *can* do, such as an advisory sanitary engineering department in the State Board of Health.

The State Hygienic Laboratory, maintained by the State Board of Health, has for a long time undertaken to make sanitary analyses of water samples, to determine their suitability as sources of drinking water supplies. Such analyses, if interpreted without accurate knowledge of the sanitary surroundings of the source, can mean very little. Speaking on this subject, Dr. W. S. Magill, director of the State Hygienic Laboratory of New York, says: "Well-established laboratories are relying more and more upon sanitary surveys and collection of samples only when made by members of the laboratory staff, or of a well-known and competent sanitary engineering staff."

This part of the work of the engineering department would, therefore, be in very close touch with that of other departments of the Board.

The problems to be solved in connection with stream pollution and public water supplies are State problems, rather than local ones. The need for a central authority, and for a uniform policy in this connection, can not be given too much emphasis. Just what this policy should be, especially in regard to cities and towns that were polluting the streams prior to the passage of the present act, is not something that can be determined off-hand. It is a question that should receive the careful consideration of some commission appointed by the board for that purpose. Such an engineering department as is proposed could furnish the necessary data for this commission to work on. California's rivers are her own, the troublesome questions due to interstate relations are almost entirely absent. She can, therefore, be independent in her decision as to what shall be prohibited as dangerous pollution.

Summer resorts.—Many of the ills resulting from poor sanitary equipment in some of our summer resorts, could be obviated by a proper coöperation between the local inspectors and such a central directing authority as an engineering division in the State Board of Health. This is another problem that is peculiarly lacking in interstate relations. California has many summer resorts, but a very large majority of the people frequenting them are from within the State. It is the duty of the State Board of Health to see that proper precautions are taken to safeguard the health of these people during the vacation time, and to see that the camps are not sources of danger, experience of their own, and by poor access to the experience of others. In this connection, there is need for a state officer, specially trained in this line of work, to confer with and advise the authorities of the smaller communities. There should be no necessity for the Board to furnish these communities with engineering services, other than general advice and outlining of policies. The need of a uniform policy in such matters, is self-evident.

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Work to be undertaken.—This has been explained, in part, in the preceding paragraph. Other parts may be briefly outlined.

Such a department should make some experiments on sewage disposal under California conditions, so that new works in the State need not be designed purely on theory, as has been the case in some instances where they were the first of their kind. Experiments in Massachusetts, and elsewhere, do not apply to California climate and conditions in many cases. Even if they did, the results of local experiments would be given more weight by local engineers than those made elsewhere.

This department should also make a study of existing plants in the State, to determine how the features of their design and operation affect their efficiency. Such a study, much more extensive than the one planned here, was made in Ohio in 1907 and 1908, with very gratifying results.

It is probable that the passing on plans for new works would not be one of the least duties of the proposed new department. This is desirable for several reasons: to insure that the method adopted is the one best suited to the case, to prevent the carrying out of plans that might endanger the health of the community building the works, or the health of other communities, and to insure the building of works that are planned to be economical and efficient.

In conclusion, it should be said that such a department, to be effective, must be an integral part of the State Board of Health organization, and must be independent of other State departments. Any arrangement to regularly refer questions of this sort to an engineering authority outside the jurisdiction of the Board, would be as unwieldy as it would be unsatisfactory. The people of the State look to the State Board of Health for advice, in matters pertaining to public health. The safeguarding of water supplies, the disposal of sewage, and sanitary engineering in general, are so inextricably mixed up with public health questions, and with the Board of Health work, that to try to separate them is well-nigh impossible—and altogether undesirable. In order to intelligently, and helpfully, answer the questions that will come before it, the California State Board of Health is in need, not of men trained in general engineering practice, but of men specially trained in biology, and that branch of engineering that has for its object the safeguarding and preserving of public health.

SYMPOSIUM ON SYPHILIS AND GONOCOCCUS INFECTIONS.

Editor's Note.—The California State Board of Health adopted a resolution, October 1, 1910, making syphillis and gonococcus infections reportable after January 1, 1911. In December the San Francisco Board of Health issued an invitation to representative physicians, clergymen, and laymen to meet with its members in a general conference on ways and means of controlling these diseases and complying fully with the State Board's regulation. The following papers are digests of addresses given at this meeting. The Rev. Frederick W. Clampett, rector of Trinity church, chairman. Dr. Julius Rosenstirn and Dr. W. F. Snow were appointed an advisory committee of this conference to confer further with the San Francisco Board of Health.

I. THE SOCIAL EVIL.

Part of an address before the Board of Health of San Francisco, by **Rev. Frederick W. Clampett**, Rector of Trinity Church, San Francisco.

For many years I have been deeply interested in the subject which has brought us together, and I appreciate the privilege of being present. The first step, in personal interest, was taken in the city of Baltimore where, for several years, I was associated with Dr. Howard A. Kelly, the world-known gynecologist, in the work of the Florence Crittenton Mission. It seems to me, that the failure in dealing with this deeply vital question in the past, was due to the unreasonable attitude assumed. The great social vice, the "red plague," as it has been termed, is an evil permanently rooted in our civilization. It has stamped itself upon the character of every nation, and, so far as our Anglo-Saxon life is concerned, the solution of the problem has been approached from two totally opposing directions. There are those who maintain that the evil should not be recognized, and the weight of their influence has been thrown into such drastic measures as may wipe out the terrible blot upon the moral life of the nation. Dr. Charles H. Parkhurst was the champion of this method of attack, many years ago, in New York City.

The direct influence of his strenuous mission simply scattered the evil and, consequently, there was no element of permanency in his work. I think I may go farther, and say that the final result was harmful.

There are those, on the other hand, who maintain that there should be a recognition of the evil, as experience seems to confirm, and that every possible step should be taken to lessen it. I am, personally, in sympathy with this attitude, and am persuaded that it is the clear duty of the lawful authorities to take such steps as may assure the fullest protection. I believe that the means to be employed should include absolute segregation, and the most thorough personal examination.

If a certain portion of the city were assigned to that end, and the evil carefully confined to that area, the danger of contamination would be minimized. It would make possible the most rigorous supervision. This step is an essential to any measures that would ensure the personal and periodic examination of the unfortunate women engaged in this awful traffic.

Every step taken ought to be impelled by the supreme desire to give every protection possible. At the present time, under the criminal laxity that exists, the prevalence of the dread disease of gonococcus infection is a menace to every condition, mental, moral, and physical. The reports which our scientists have presented this evening, embodying statements from the surgeons of army and navy, and the leading physicians of the land, indicate a dreadful condition, a scourge upon the young manhood of the land. If this condition is to be altered, it can alone be done by the law of prevention, and that law can be successfully operated only by segregation, and the most rigid personal examination.

The action of the Board of Health, in organizing this conference, is deserving of the highest commendation. We recognize the first step in giving publicity and direction to an onward movement, as more vital than any other, at this time, to the welfare of the body politic.

II. THE PREVENTION OF THE SPREAD OF VENEREAL DISEASE.

RABBI MARTIN A. MEYER, Temple Emanu-El, San Francisco.

Two separate and distinct phases of the question of extra-marital sexual relations are being constantly confused and intermingled. On the one hand, there is the moral question relative to the ideal of chastity in the male, as well as in the female. On the other hand, there is the very distinct physiological question as to whether restraint is healthful for the male, as it is for the female, after the age of full puberty has been reached. Sober and reliable medical opinion is divided, and apparently hopelessly so, into two opposing camps. On the one hand, there is the medical man who poohs-poohs the possibility of any danger arising from chastity, but who sees the worst possible results from illicit and promiscuous intercourse. While, just as vociferously and positively, does the opposite school proclaim the desirability of sexual expression from every possible point of view, though it usually advises that one be careful, if he can not be good, as the saying goes. This division of opinion, apparently expert, is one of the most difficult points which the crusader has to pass at the very outset of the campaign.

For the man whose ideal is chastity, and whose practice conforms with his ideal, there is no problem, and no question. He answers, by his own example, the doubters who protest the impossibility of such a life, and delights in pointing to the happy results in himself and his family, when he has any, of his continence. Yet even he may be the innocent victim of other's dissipations, for the communicability of venereal disease is so great, and its prevalence is so general in the community, that the touch of a towel in a public conveyance or lavatory, the cup at the drinking fountain, the headrest of a barber's chair or a railroad train; any of these may carry the dread infection. So even the chaste man, for whom we may say the evils of prostitution do not exist, may be the innocent victim of these hideous diseases.

Yet it would seem to be the height of folly to tinker with the minutiæ of this dread disease, were we not to attempt to go to the very fountainhead of the spread of these sicknesses—the prostitute herself. We are dealing with one of the most potent, if not the most potent of human instincts. Together with hunger, the sex impulse represents the lowest levels of life, and at the same time permeates and influences the highest also. Were this impulse to cease through psychologic or physiological changes in the human, or in the animal, we should be confronted with the problem of the cessation of life. This impulse is life, the new life trying to express itself. Tampering with it is a serious and dangerous thing, for, like the force of the mountain torrent, unless diverted into safe channels of activity, it threatens everything before it with destruction, when restrained from its natural expression. Yet its abuses by the human abase it, and degenerate it, to levels below those of the brute himself. Unfortunately, many refuse to face the facts of the sex life, its potency, its expression, and its repression; to face the most obvious facts of the case, so that, despite their good intentions, they are little better than the blind leading the blind. This has been since time immemorial, it is, and who can deny but that it ever will be? Accepting the fact of the continued existence of the sex impulse, our monogamous civilization, and our economic world, feed the institution of prostitution. Say what we will, do what we will, shout as we will, prostitution is an institution incident to social and economic conditions of the modern world. Prostitution is, without doubt, the most fruitful source of venereal diseases. Statistics, which show that about ten per cent of the population is infected, at one time or another, compare very unfavorably with the statistics of tuberculosis infections and the like. We are warring on the white plague with might and main. Its nature and its treatment are well understood. Recoveries are now as common as cases are numerous. We have outgrown any finickiness about discussing the disease, its causes and its cure. Let's rid our minds of their silly prejudices on the subject, and discuss the "red plague," as I believe venereal disease is now euphemistically called, with the same directness, and the same honesty of purpose. Public health demands this free and outspoken attitude, fully as much as it would in the case of yellow fever, or the bubonic plague. I don't think the good Lord would have made this instinct so strong in us if he wished us to be ashamed of it, as we apparently are when it comes to discussing it in a pure spirit for the public welfare.

I should suggest that the best and, at all hazards, the least objectionable method of preventing the spread of this disease would be education of both sexes, even before puberty is reached, in the anatomy and physiology of sex and the danger of disease from illicit intercourse. Particular stress might be placed upon the misery which has been brought in the world of innocent women and children by the wild life of an indulgent parent. For those who can not be swayed by the love of the pure, let the fear of evil be the deterrent force, if only it will deter. We can't introduce such teaching into the curriculum of our public schools certified to do this work. But the danger is that every day which trained, to do this work properly. This is true for the professional teachers of to-day, but there are already enough well informed physicians, male and female, who would be glad to give some of their time for this end, till the teacher was turned out by our normal and training schools certified to do this work. But the danger is that every day which is neglected is the occasion of some child failing in life because he had not been warned or properly insructed.

Like practically every other great problem of to-day, this problem has its roots far down in the general social structure of the world. While economic conditions make it harder and harder for honest girls to remain honest, and while these same conditions make it increasingly difficult for young men to marry, prostitution will flourish, encouraged by the male to gratify his desire, and by the starving female to satisfy her normal want for food, drink, dress, and play. Nor can we fail to notice the effect of prostitution upon marriage. In a word, it is the enemy of married life, not only that it delays the age of marriage, or renders marriage undesirable, but it is a constant menace to the home. So, together with education in sex matters, together with emphasis upon the possibilities of restraint and continence, we shall have to work for better economic conditions, if we are going to remove the greatest of causes which makes for further continuance of prostitution and its evils. Just as it is of little use to give the consumptive milk and eggs, while he continues to live in his dirty tenement, lacking light and air, and decent surroundings, so do we but tap the social evil at its least telling point if we try to reform without attempting to cure, conditions which force men and women into prostitution. It has been claimed by some socialistic enthusiasts, who have an eye to the moral benefits which might accrue to mankind from their purported régime, that their industrial scheme will reduce the evil of prostitution to its lowest limits, if it will not entirely do away with it.

It might be a good thing if we could but protect our residence neighborhood from the presence of these ghouls, whether they be public prostitutes or private women. One of the worst phases of our present system of *laissez faire,* is the presence of such creatures in the very heart of our best family districts. I heard recently of a case where such a creature was doing a thriving business in the neighborhood of one of our large schools, right under the shadow of the homes of the boys and the girls. Similar results have been noted in all cities, after the breaking up of ''red light'' districts. New York has not yet overcome the evil results of the breaking up of its tenderloin. The whole city is now affected, as the contagion has been sent into every part of the municipality. Los Angeles can tell the same story. The so-called respectable apartment houses have been invaded by these women with the worst results to all parties concerned. We must protect our family districts at all costs, our boys and girls, children of tender age, whom these harpies seduce for their pleasure and profit.

I should like again to commend the practice of circumcision which is general among Jews. While this is not an absolute prophylactic against venereal disease, as at one time it was supposed to be, the general good and healthful results of the practice, upon the sex organs and instincts, is of such a nature as to commend it to the general practice of physicians, and to the public. I understand that many medical men advise it, whenever they feel that the parent can be made to understand that the act is a surgical one, and need only have religious significance when the parent so desires it. That the circumcision of the prepuce diminishes such evils as masturbation, is without question; that it prevents nervous affections arising from disturbances in the centers which control the sex impulse, is conceded. That it is cleanly, and so offers less possibility of infection, may also be contended. It surely protects against the lesser and milder forms of infection, and so may be said to have prophylactic value, though not so general as we once supposed it had. Yet, it ought to be commended for its beneficial effect upon the organs and the system in general.

Another regulation, which might apply to the houses of prostitution with good effect, was the one of which Dr. Frinck spoke at the session of the local Board of Health. His suggestion that the sale of spirituous liquors ought to be forbidden in houses of prostitution, or where it was carried on, seems sane and helpful. It would prevent the house of prostitution from becoming a lounging place for young men, so lessening the opportunities for intercourse. It would reduce drunkenness, in which condition the results of sexual congress are said to be of worse effect than otherwise, and above all, it would diminish the numbers of those young women who under the influence of liquor are assaulted, and ruined for life.

Medical science itself seems to promise the greatest palliative of all proposed remedies for the prevention of the spread of venereal disease. While it may yet be too early to posit too much as the results of Professor Ehrlich's wonderful "606," even the present returns indicate that at last something has been found which can stay the ravages of the plague of syphilis, and save the victim from his own folly, and those near him from imminent danger. While the knowledge of a well-nigh positive cure for such diseases may remove the fear of contracting them from the minds of some, and thus indirectly encourage their indulgence in sexual intercourse, the positive benefits in the way of relief for those suffering from the disease, both innocent victims, and those who have become infected through their own appetites, far outweighs any possible theoretical argument against the use of this new preparation, "606," and similar preparations. Certainly they suggest new possibilities in the regulation of health with respect to these diseases, promising a future in which their spread may no longer be a problem as it is to us to-day.

Public safety, physical welfare, and even moral considerations, demand the segregation of the prostitute, so as to protect our family districts; so that the young man would go with his eyes open, and with due warning, into the local Yoshiwara, to his own hurt. I know there is a good deal to be said against the plan of segregation. Yet it can be no worse than the present hit and miss policy of ours, and it promises a good deal better. We know that a good many good people would call this licensing vice, and encouraging young men to do wrong and young women to go wrong. These good people need education on this matter. There is need for a free and open agitation of the public mind, so that it can look without passion upon this topic, and the crying needs of the situation. We know that there is another class who would call out that this was unfair discrimination against the female sex, as it gave the male prostitute free rein, and restrained the female. Yet half a loaf would be better than none. It would, we are told, not be able to control clandestine prostitution, the prostitution of shop girls, and factory girls, and the like. Does our present system offer any promise of better conditions? Clandestine prostitution will reveal itself in time, if the police are vigilant, and neighborhoods be alive to the honor of their name, and the safety of the children. Segregation would minimize, if not entirely destroy, white slavery, for such a section of the city would be under the strictest police supervision, and every new comer would be known to the police, her history, and everything else about her past, and her present.

Together with such segregation, and hand in hand with it, let there be weekly or biweekly medical inspection by competent *female* physicians. I should take this part of the work out of the hands of men altogether. It seems a travesty to ask men, mere men who are easily appealed to through their sex instinct, to undertake this vital work. We have now, practically in every community, a considerable number of competent women physicians, who could and would do this work to the best advantage, from every point of view.

Naturally, as an adjunct of this scheme, a lock hospital is a necessity. Here the diseased prostitute ought not only to receive medical treatment, but she ought to have the ministrations of religion, and the suggestions of good folk, how to do something else with herself for a livelihood than sell her body. If it were possible that light handwork, housekeeping, and a variety of other things, be taught these women during their medical incarceration, the results would be happy for many of them. Not necessarily confined to their beds during such treatment, they could be made useful to themselves, to one another, and to the institution. Nor would society be the sufferer by such training. This would not necessarily encourage prostitution, it would protect young men from their own folly, just as we have stepped in to protect the Cubans and the Filipinos from their own foolish habits with regard to public sanitation.

I put my greatest trust and hope in all this problem, in the educational campaign. The other points I consider halfway measures, which will palliate but hardly cure. Yet the evil is so great that it demands some palliation, even though it may seem to be compromise with crime and wrong doing, at first sight. I have often seen a teacher let a naughty child go pretty far, so that the larger occasion might present itself, the better for him to get hold. I hold to the ideal of chastity; I am satisfied with the medical standing and advice of those who find chastity no evil, and are ready to commend such a life of chastity to our young men. Yet I want to face the patent facts of life, while holding tenaciously to my ideal. I desire to find some practical means of minimizing the evil of prostitution, venereal infections, and kindred ills, to the end that it may be controlled, restrained, and, in God's good time, eradicated from human society. So I hesitatingly submit these faulty thoughts to the consideration of thinking men and women.

III. PRACTICAL MEASURES.

By Henry H. Wyman, C. S. P., St. Mary's Church, San Francisco.

The social evil has always been the most terrible, the most awful in its results, that human society has ever had to combat.

The moral degradation which it induces is hardly greater than the physical misery caused by the well-nigh incurable diseases which it propagates. Hence the guardians of the public moral and civic welfare have always judged that its elimination was the most urgent need of society. The responsibility for its existence does not, however, rest wholly upon those who make and execute our laws. Society has never been wholly free from it. Even when saints sat upon thrones it invariably cowered before them under cover, when it dared not raise its head in the open. Probably nowhere are its ravages more fearful than in most of our American cities, where, by statute, it is criminal, and the law, making it such, practically a dead letter.

The California State Board of Health has honored me by asking my opinion as to the most efficacious way of combating this evil, in order to prevent the spread of the malignant diseases above mentioned. In reply, I beg leave to submit the following statements:

(1) The evil should be forced as far out of sight as possible.

(2) Fallen women who persist in their evil ways should be segregated together; the present police ordinance requiring a certificate of immunity from contagious diseases, should be enforced, and so amended as to make no certificate valid, unless signed by a physician approved by the Board of Health.

(3) The police department and the Board of Health should coöperate as far as it is possilble under existing laws, in lessening the evil and its awful effects.

(4) Every possible inducement should be held out to the unfortunate victims of this vice, to reform; and, when necessary, every encouragement given them to enter Magdalen asylums.

IV. EDUCATION AND SEX HYGIENE.

By PROFESSOR C. E. ROUGH, chairman Educational Committee Association for Study and Prevention of Syphilis and Gonorrhœa.

In reply to your request to contribute something to the symposium on the red plague, I wish it were possible to say something definite and convincing upon the educational aspect; but, concerning this problem, there is no general consensus of opinion, much less any firm foundation in principle, by which we may prescribe and direct practice, or suggest legislation.

The prevention of the spread of syphilis and gonorrhœa, is but part of the larger problem of sex hygiene, and sex hygiene is but part of the still larger problem of individual health, purity, and efficiency. Individual and national efficiency, is just now a popular theme in education, and in the halls of legislation, and it may be the opportune time to attack this special problem from this point of view. At least, it seems a good time to quit "doctoring" the symptoms of physical and social diseases, and to begin the general and specific attack upon real causes.

The immediate causes of these dread diseases, are the germs that produce them. No doubt it is possible, as Pasteur said, to rid ourselves entirely of these germs, and, from the standpoint of individual and national efficiency, this is eminently desirable, and worth the immediate attention of the state. But the individual and social degradation with which syphilis and gonorrhœa are so largely associated, might continue, indeed might increase, with the absence of these diseases. This, of course, must not be misunderstood as a reason for allowing them to continue their dread work. The immediate cause of these diseases is the germs, but the real causes are the ignorant and impure persons who disseminate them. Now these ignorant and impure persons were once innocent children. *The educational problem is, not "to keep children innocent," but to keep them "pure in heart" by thorough going intelligence, and continued right action.* Tennyson sang the keynote to personal efficiency in the lines:

'My strength is as the strength of ten,
Because my heart is pure."

The educational means for realizing this aim are such social conditions as insure that each child gets its knowledge of sex matters from intelligent, pure-minded persons, instead of from the ignorant and careless, or still worse, from the vicious.

One thing is absolutely certain: each normal child will have sex knowledge. The alternatives are not innocence or impurity; it is the pure or impure sex life. Two irresistible processes produce sex knowledge and sex action; first, the growth and development of the sex organs, along with the corresponding instincts and impulses, simply force the sex problem into consciousness; second, social intercourse through language and example, supply the stimuli and occasions for the action, and development of the instincts and impulses. These instincts and impulses may lead to abnormal conditions, but their suggestions and development are just nature—neither pure nor impure. The source of both physical and moral contagion is society.

Our hope lies in the fact that the growing child is susceptible to good influences, as well as bad. Children are ready to be inoculated with the seeds of knowledge and action, and if they continue to be inoculated with vulgar vocabularies, and impure practices, and the germs of disease, it will be because parents and teachers fail to inoculate them with pure language and right habits. The problem is how to produce a "pure culture," and here, as everywhere, there is the dual problem of the "germs," and "the conditions of their propagation." The first problem under existing conditions, is that of the popular opinion on all sex matters.

To pass a general law making it obligatory upon parents or teachers to give instruction in sex hygiene would be futile. Under present social conditions most teachers, and, be it said to our shame, most parents, are neither fit in knowledge nor courage to give instruction in sex hygiene. Until the general public will support, or at least quietly endure, general instruction in these matters, it must be left to experts as occasions arise. More persons than "only a few foolish physicians and hysterical women with nothing else to do" must be interested in this matter.

The first problem, then, is the development of an intelligent public opinion, and it is problematic as to how far legislation can do this. One of the ways this might be promoted, would be by the commission plan. A safe, sane, reliable set of facts, presented to philanthropic clubs and persons as the result of the investigation of a commission, would be one way of increasing intelligence. Two deputy superintendents, a man and a woman, appointed from a list proposed by joint action of the State Board of Health and the State Board of Education, who should give attention to the whole problem of school hygiene and school sanitation, would be a move in the right direction.

Until the general public is ready for such legislation, we must rely upon experts who are intelligent enough, and pure-minded enough, to do this work wisely. The only legislation on which we certainly ought to be able to agree, at the present, is the establishment of county and city parental schools, into which boys and girls who are sources of physical and moral contagion may be sent without being charged with crime.

SIGHT SAVING SERVICE FOR CALIFORNIA.

By Samuel Ely Eliot, Secretary Committee on Prevention of Blindness, Russell Sage Foundation.

The value of good eyesight needs little argument or demonstration. To realize that your eyes are indispensable, it is only necessary to close them for a moment, and try to imagine that you are blind, or to borrow a pair of near-sighted glasses, and try to perform the most ordinary operations with them on. Indeed, maximum human efficiency is only possible with good eyesight, so that it is natural in an age, the watchword of which is coming to be Conservation, that there should be a movement for the conservation of eyesight and the prevention of blindness, which movement will be presently described in greater detail. First, however, a word as to the methods of work at the disposal of this movement.

PREVENTION OF BLINDNESS.

Blindness, of course, is due to a great variety of causes; industrial accidents, accidents at play, toxic amblyopia, syphilis, cataract, progressive near-sightedness, blindness from wood alcohol poisoning, etc. But it is roughly estimated that about 40 per cent of all the causes of blindness are preventable; perhaps the greatest single preventable cause of blindness is "babies' sore eyes" (*Ophthalmia neonatorum*). This disease is caused by any one of several germ infections of the eyes of children at birth. Perhaps 75 per cent are gonococcic. It has been estimated that 10 per cent of all cases of total blindness are caused by babies' sore eyes; and of course a great many cases of one-eyed blindness, and much serious eye damage, result from the same cause.

Fortunately, a direct preventive measure was discovered by Professor Credé of Leipsic, in 1882. He found that a drop of 2 per cent solution of silver nitrate dropped in the eye of an infant at birth absolutely kills any germs that are present, and consequently prevents any possibility of infection occurring.* Of course, the majority of reputable physicians in their obstetrical practices, employ this prophylactic in all cases where the suspicion of infection exists, but many physicians, as yet, are not fully conscious of their responsibility in this regard; and moreover, midwives, particularly those of American origin, are ignorant of the prophylactic, and are untrained in its use.

CAMPAIGN FOR THE PREVENTION OF BLINDNESS.

In 1905, through the instrumentality of Dr. F. Park Lewis, of Buffalo, the American Medical Association appointed a committee on ophthalmia neonatorum. This committee undertook to emphasize the importance of the subject throughout the medical profession of the country, and, by correspondence, investigation, and reports, achieved most valuable results in this direction. A few years later, through the investigations of the New York Commission for the Blind, in whose report the question of preventable blindness was especially emphasized, laymen became interested, notably members of the board of directors of the Russell Sage Foundation, and members of the New York Association for the Blind. As a result of this interest, a coöperative medical and lay movement for the prevention of blindness, was inaugurated, and a committee of the New York Association for the Blind began a campaign in New York State, placing an executive secretary in charge of the work. The successful activities of this committee aroused much interest in many quarters of the country, outside of New York State, and, in a short time, organizations for the prevention of blindness were formed in Ohio, Maryland, and Massachusetts. About a year ago, the Russell Sage Foundation determined to assist in carrying the work still farther afield, and to furnish means for the inter-communication of those engaged in work in the different states. Accordingly, an office was established at 105 East Twenty-second street, New York City, and Mr. Samuel Ely Eliot was appointed to carry out the above purposes. In May, Mr. Eliot took up this work, and since that time has been engaged in establishing the New York office, and in field work in several States. In the early summer, three new State organizations were formed, namely: Kentucky, Missouri and Arkansas; and, in the former two States, active campaigns are going forward for the prevention of blindness.

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* Medical practice has established that 1 per cent solution silver nitrate is better, and on the whole has adopted its use, in preference to other prophylactics.

Mr. Eliot will be in California during January, arousing public sentiment in regard to the necessity for prevention of blindness work in this State.

WHAT CAN BE DONE IN CALIFORNIA.

In California there is, as yet, no census for the blind. There are no means of determining the percentages of blindness due to various causes. The causes of blindness of pupils at the California Institution for the Blind in Berkeley, have, for the most part, been reported by the parents of these pupils, and are frequently faulty, or purposely misleading, and, in the hospitals of the State the records of eye cases have not been so kept as to make statistical studies possible. Again, there is little, if any, knowledge as to the number and status of the midwives practicing in the larger cities. Furthermore, in California there are no laws on the statute books for the prevention of *ophthalmia neonatorum.* A copy of such a law is appended to this article. Finally, no publicity campaign has as yet been waged for the education of the general public as to the dangers of *ophthalmia neonatorum,* and the means of prevention.

All of these things can, and should, be done in California.

CONSERVATION OF EYESIGHT.

The workers in the prevention of blindness movement, found that their labors led them naturally in the direction of combatting other causes of blindness and eye distress, besides *ophthalmia neonatorum.* It was practically inevitable that the work should expand into the conservation of eyesight, and such indeed has come to be the case, for, on December 17th last, a meeting was held in New York City, at which the prevention of blindness and the conservation of eyesight were fully discussed, and a national organization for the above purposes was organized. At this meeting the following topics were ably discussed: *Ophthalmia neonatorum,* the midwife problem, tracoma, industrial accidents, and the various causes of eye strain, such as poor day lighting and artificial lighting of homes, factories, schools and buildings of all kinds. Especial attention was devoted to bad printing and the wrong kind of paper in text-books, and to the necessity for more efficient medical inspection of schools, as well as the wider adoption of this important institution throughout the country. Eye strain, as induced by certain occupations, such as the textile industries, was another topic of discussion, and attention was also drawn to the fact that infection can frequently be occasioned by unclean swimming baths. Finally, especial emphasis was laid upon the all-important matter of gathering full and accurate statistics regarding the causes of blindness and eye disablement, not only from schools for the blind, and eye wards of hospitals, but from individual ophthalmologists and physicians throughout the entire country.

The newly formed National Association will, of course, only be able to take up the various problems above indicated, one at a time, or a few of them at a time. It will work in coöperation with the American Medical Association, the National Education Association, the Russell Sage Foundation, and all other organizations through which its propaganda can be profitably undertaken.

Good eyesight has never before been so essential to the success and welfare of both men and nations as it is to-day. Yet never have the very inventions and practices of civilization itself so imperiled eyesight. Hence the great and real usefulness to be expected from a movement for the prevention of blindness and the conservation of eyesight.

The "Howe Law," contained in chapter 41 of the Laws of 1890, State of New York, repealed and amended by section 288, chapter 325, Laws of 1892, Penal Code, is as follows:

> Section 288. *Unlawfully omitting to provide for child.*—A person who, * * *
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> 3. Being a midwife, nurse or other person having the care of an infant within the age of two weeks, neglects or omits to report immediatey to the health officer or to a legally qualified practitioner of medicine of the city, town or place where such child is being cared for, the fact that one or both eyes of such infant are inflamed or reddened whenever such shall be the case, or who applies any remedy therefor without the advice, or except by the direction of such officer or physician; or,
>
> 4. Neglects, refuses or omits to comply with any provision of this section or who violates the provisions of such license, is guilty of a misdemeanor.

Substantially the same law has been passed in Maine, Rhode Island, Massachusetts, Pennsylvania, Minnesota, Ohio, Maryland, Michigan, Connecticut, Missouri, Iowa, Illinois, and New Jersey.

THE PSYCHOLOGY OF PLAY.*

By Philip King Brown, M.D., San Francisco.

There is no more inviting opportunity for indulging in aphorisms, than is presented by the consideration of the psychology of play. It is easy to believe that the boy's instinct for throwing is satisfied by giving him a bat and baseball, and even encouraging and directing the use of them, if the instinct is strong. It should follow that such a child, properly managed, never has the desire to throw stones at Chinamen, or through windows. It is even more interesting to think, if the instinct be observed, first, after it has taken the destructive form, that it could be diverted into the baseball channel under proper guidance and training. Thus far, the psychologist leads us most entertainingly, and it seems a little unfair to ask if boys ever fail to react normally and completely to the baseball stimulus, and what the solution of the problem is if the boy prefers throwing rocks at Chinamen, or stray cats.

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* Read at the annual meeting of the Playground Association of California, December 15, 1910.

We learn most through our failures, and it is my purpose to review with you some of the reasons for the seeming or real failure of play in our modern educational, or better still, developmental system. The points I wish to make clear are, that there is a lack of appreciation of the value of well taught systematic, and properly supervised play. It has been wholly separated from our educational system, and there is no adequate provision for it in our present scheme of living.

The general law, regarding the expenditure of energy in the child, is that it will follow the direction in which most of its senses, or its strongest sense, becomes interested. If the interest is in proportion to the ready energy, if the content of the occupation grows with the interest, one finds the child developing habits of expenditure directly proportionate to its interest, or its need for outlet. In the well established nursery of a maternity hospital, one hears little or no crying of babies, although there may be twenty at a time in the room. They are well taught to exercise their limbs by kicking, to react to quiet and darkness by sleeping, and they are prevented from becoming restless by regular feeding or change of position. Their energies are all provided for in a well planned scheme that fits, perfectly, the average normal baby. On the other hand, in the first days of life, babies may be taught to fret and cry, to suck their thumbs or anything else they get hold of, to be restless, to sleep and eat irregularly, and to lay the foundations for nervousness and ill health. From the day of birth, there is energy and interest to be diverted into proper channels, and the problem is not solved until provision is made, not alone for the surplus or overflow energy, but for the steady undercurrent which must be kept in proper channels, and, finally, even in the earlier years of life, for those forms of energy which Wm. James calls the latent ones, which probably make for the higher goals of character and attainment; the forces which are called into play by the unusual influences of life, whether sickness, sorrow, adversity, or sudden responsibility, or even great and unexpected opportunity and success.

The part of play in the development of health and character, is second to nothing that influences the life of the individual. It is the first expression of joy, of health, of energy, of discipline, in the child's relation to his fellow beings, of selfishness or unselfishness, of training of muscles and nerves, and every sense the child learns to appreciate. It is the natural outlet of physical forces, too, often repressed in the youth. It is the boon of the adult working under strain of business or responsibility, in whom it must stand in close relation to his maximum point of efficiency. There can be no health built up, on lines of education, that eliminates or belittles play, and it is this point that seems to me to condemn our present system of public school work, wherein the paternal relation of the government exercises its right to dictate what shall be stuffed into the poor child's head in a definite number of hours per day, leaving it to real parents to carry out their own ideas of play, unassisted by opportunity or suggestion.

Let us compare the developing influences of school education, and ideal play, and see which one would choose for one's child.

In school work, the standard is set for the average child, and the work of a class is governed by the requirements of the average child. A definite and progressive training of the mind and the memory, concentration of attention, obedience to rule and discipline, and, occasionally, the personal influence of a teacher of unusual character, who puts truthfulness, honor, and unselfishness, and a host of fine ideals into her work—this is education. All this is exceedingly satisfactory and helpful. There is no doubt of the value of the school education, but what is there in all this that the ideal teacher could not do almost as well through play? Certainly, the training of the attention and the memory can be done vastly more easily through play, because most play is the very essence of system, interest, and discipline. Where do we find the teaching of self-control, judgment, healthy romance and imagination, relative values, sacrifice and real unselfishness, accuracy in deed as well as thought, the discipline of adversity, and the proper outlet for the wonderful investigative and creative instincts in children? Certainly, one would not look for them in the ordinary school education of the twentieth century American child, except as they are supplied by some unusual teacher, not, however, as a part of the system she stands for, but because of her own personality.

Are not all of these things attributes of play? Play, I mean, as we ought to understand it, and not as the mother does who says, "Johnnie, run out in the street and play; you are in my way." What she means is, "Run out in the street and get a little exciting diversion, and work your mischief off on some one else." The truth is, Johnnie does not know how to play. The word suggests only release from five hours of as close contact with assorted words, figures, and sounds, as one poor teacher can keep him, together with forty-nine others. No one ever taught Johnnie what play really meant. He is not allowed to play marbles or ball or tops at school, or anything else that is made possible by the association of boys in a suitable open space. Recess is for stretching the limbs, and eating lunch, and when school is over a policeman is waiting outside to assist, if necessary, in dispersing the children in the direction of their homes, while the janitor locks the gate, shutting off from use the fine schoolyard where the foundation stones of real character, and real education, and real health, could be laid. The first great step forward is to fit up and open every school yard in San Francisco as a playground out of school hours, and on Saturdays, Sundays, and holidays. Next spend millions, if necessary, a little at a time, in enlarging the yards. This will remove the objectionable complaining neighbors who have no children and never had any real youth. Finally omit two school afternoons for each class each week and have the class play in the yard under the supervision of trained teachers. This idea has been so successfully carried out in Germany that it is spreading over the land with great rapidity.

Johnnie needs a properly trained person to teach him how to play, and he needs a place in which he can put into practice what he has learned about play. He must come into competition with his kind. He will find his own level, promptly, and will learn rapidly by experience, as well as under the guidance of a teacher, and the desire for achievement. Nothing can give him a getter measure of himself or his playmates; he must judge them, and be judged by them, in the quick way of the child. Nothing else in life can so easily teach him to be a good loser. Nothing else gives the discipline, and the exercise, of body and mind.

There are elements in play that are objectionable, as there are also in work, for that matter. Playing solely to win, rather than with the true spirit of sport, will make selfishness and greed where unselfishness and generosity belong. Games depending solely on chance, or where chance outweighs skill, develop the wrong side of our natures. There is a limit, also, to the good influence of excitement, but these points only emphasize what I mean, when I say that the child must have a properly trained person to teach him how to play.

Now, let us ask ourselves, as parents, whether we are doing our duty toward the children, in the present division of responsibility between ourselves and our paternal government. Do we use the opportunity given us, to teach our children to play, or have we supposed, right along, that the play idea in the child spontaneously germinated and grew unaided, or did we think that the wise government provided, in education, all the teaching necessary for the well rounded character development of the child. Personally, I do not believe that one tenth of us ever thought about it at all. If we did, we would hang our heads in mortification over the failure of San Francisco to vote the money for playgrounds, a month ago. We would realize that we, ourselves, know nothing of play, or how to teach it. We would know that there really is no place for our children to play.

We examine the situation further, and find that there is no place or time for play in the school education system, and the school yard is not available because it is too small, or too clean, or too near the neighbors. Certainly, the idea of play was left out of our school system, and, more certainly, it has not yet gotten the attention it should from parents. And yet, the interests of the parent and the government are the same; to make healthy minds and bodies. The government does a part, and, possibly, it may be induced to extend its paternal care, and do the part we have left unprovided for. There is no finer thing in our democracy than the reaching out of that paternal hand in the interest of the child, as it does in building schools, and opening their doors to children, at the same time that it closes factory doors to them. It goes further, in most states, by not alone enacting a child labor law, but compelling children, between certain ages, to attend school.

Group games, such as baseball, football, basketball, rowing, and track athletics, have been referred to as laying the best possible foundations for good citizenship, for nothing else gives the child so much sense of his own part, and his responsibility to the whole, as playing the game as one of a team. Here are the first lessons in organization; respect for leadership, subordination of one's individuality for the good of a cause, a cause of which each one is a necessary part. Then, there is the responsibility to society, the feeling that although one is only a small part of society the very act of being chosen to represent that particular part, makes a standard of courage, honor, and effort to be lived up to, which represents what is best in all those who make up this particular society. It is easy to see that the boy trained in the playing of group games, has learned one of the most effective lessons, in loyalty and citizenship, that could possibly be taught him. It is the kindergarten of the citizen, and there is nothing to compare it to, in the book work of our educational system.

Finally, I would recommend to you the reading of two books which speak for the child, and his right to play—Jane Addams' "Spirit of Youth and the City Streets," and Ellen Key's "Century of the Child." When play has been dignified, as it should be, and has been raised to the level of art and education, there will be more health in the community, and less of the overwrought mind and body, and less of the degenerating influences of sensationalism, less fastidiousness, less super-refinement, less egotism and class distinction, which are making for the weakening of the race.

WHAT PENNSYLVANIA IS DOING.

Replying to your favor of the 3d, I beg to enclose a copy of our Bulletin for March, 1910, which I think is the one you refer to. I also enclose Bulletin No. 14.

To bring this data up to date, I may add that we now have one hundred and fifteen tuberculosis dispensaries, that, up to October 31, 1910, had treated 37,020 tuberculosis sufferers. At our Mont Alto sanatorium for tuberculosis, we now have about eight hundred patients, and up to October 31, 1910, had treated 3,980 poor consumptives.

The legislature of 1907, gave the State Department of Health $1,000,000 for tuberculosis, for two years, and, in 1909, the department was given $2,000,000, for two years, for tuberculosis.

We are at present erecting a new western sanatorium, the first buildings of which will accommodate one hundred and sixty patients, with provisions for increasing the plant to accommodate six hundred and sixty.

A similar sanatorium will be erected in the eastern end of the State. With our new buildings that are being erected at Mont Alto, and with these two additional sanatoria completed, the State will be able to care for over 2,200 patients, in sanatoria that are ideally located, and where every best possible care is taken of the patients.

No charge, whatever, is made at this institution, but it is understood, of course, that patients are not able to pay for private sanatorium treatment.

Bulletin No. 9 cites a better statement of the work being accomplished, than I could possibly write you at this time. You are welcome to publish any part of it, as a statement from me.

Three million dollars spent in conservation of public health, shows a saving of twenty-three million dollars to the commonwealth.

The lives of thousands of little children have been spared because the state, in its wise beneficence, has furnished diphtheria antitoxin for the poor.

Typhoid fever is killing 2,500 less people per year, in Pennsylvania, than it did four years ago.

Tuberculosis now claims 1,000 lives less every year, in this state.

Industries seek states where health records show a low death rate.

If I can be of any further service to you, I trust that you will advise me.

Very truly yours,

SAMUEL G. DIXON,
Commissioner of Health, Commonwealth of Pennsylvania.

WHAT MASSACHUSETTS IS DOING.

In reply to your inquiry as to the financial and administrative aspects of the Massachusetts method of health administration, I beg to submit the following article which, it will be understood, is by no means comprehensive. You ask for (1) a brief summary of the amount invested in public health control of this state, and (2) the advantages to the people of this investment.

The appropriation made by the legislature this year (1910) amounted to $148,700. The appropriations for the various branches of the board's work are as follows:

1. For the salary of the secretary, $5,000.
2. For the general work of the board, including traveling expenses, a sum not exceeding $20,000. (Appropriation, 1909, $27,500.)
3. For salaries and expenses in the inspection of milk, food, and drugs, a sum not exceeding $14,500. (Appropriation, 1909, $14,500.)
4. For expenses in the examination of sewer outlets, a sum not exceeding $14,000. (Appropriation, 1909, $12,000.)
5. For expenses in the production and the distribution of antitoxin and vaccine lymph, a sum not exceeding $20,000. (Appropriation, 1909, $20,000.)
6. For printing and binding the annual report, a sum not exceeding $3,000.
7. For services of engineers, chemists, biologists, and other assistants, and for other expenses in protecting the purity of inland waters, a sum not exceeding $36,000. (Appropriation, 1909, $36,000.)
8. For salaries of the State Inspectors of Health, a sum not exceeding $25,000. (Appropriation, 1909, $25,000.)
9. For expenses under the act establishing health districts, a sum not exceeding $6,800. (Appropriation, 1909, $5,000.)
10. For expenses in connection with the watershed of the Charles River Basin, in the city of Boston, a sum not exceeding $1,800. (Appropriation, 1909, $1,800.)
11. For compensation, and expenses of the State Examiners of Plumbers, a sum not exceeding $4,400. (Appropriation, 1909, $1,600.)

As to (2) the advantages to the people of the investment: First, as to the work of the board in the enforcement of the laws relative to the adulteration of foods, it was said by the governor of this commonwealth, in 1908, that "the Massachusetts State Board of Health has led the nation," and that we were compelled to call on the nation to enforce, in other states, a national law less effective than the Massachusetts laws, old and new, for the supervision of dairies and slaughterhouses, and for the prevention of the adulteration of food. In this connection it may be noted that the legislature passed the first law, relating to the sale of food and drugs, in 1882, the year when the board published a supplement to its annual report, containing information on the adulteration of food. I will consider, first, the inspection of foods and drugs, including milk; second, dairy inspection, and third, the inspection of slaughterhouses.

The number of samples of food, including milk, and of drugs, examined during the fiscal year of 1909, is shown in the following table, together with a summary of the work done since the passage of the law, in 1882:

Food and Drug Inspection (1882-1909).

Summary.	Years.	
	1909.	Total 1882-1909.
Number of samples of milk examined	4,611	105,608
Number of samples above standard	3,584	68,098
Number of samples below standard	1,027	37,510
Number of samples of other kinds of food examined (not milk)	1,837	64,541
Number of samples of good quality	1,504	52,670
Number of samples adulterated, as defined by the statutes	333	11,871
Number of samples of drugs examined	889	20,471
Number of samples of good quality	708	13,340
Number of samples adulterated, as defined by the statutes	181	7,131
Total examination of food and drugs	7,337	190,620
Total samples of good quality	5,796	134,108
Total samples not conforming to the statutes	1,541	56,512

The total number of prosecutions entered during the fiscal year of 1909, was 296, and the amount paid in fines was $5,666.74. The total amount paid in fines, during the entire period, was $78,743.52:

No subject deserves greater attention, to-day, on the part of the public, than that relating to a wholesome supply of milk. While there has been a gratifying improvement of dairy conditions, the results are yet far from satisfactory. During the period covered by last year's report of the board 1,771 dairies were examined, and the attention of the boards of health of the cities and towns wherein the dairies were situated, or the product thereof sold, was called to a total of 3,375 objectionable conditions. As in former years, suggestions were made as to changes regarded as necessary, in the interest of a wholesome supply, and of the public health. Of the total number of dairies examined 1,439 were situated in Massachusetts and 332 in neighboring states. The extra-state dairies were visited, because of the fact that their product is marketed in this commonwealth, and if found to be other than the fresh, clean product of healthy cows, is, under the standards fixed in accordance with the provisions of the national law relative to food and drugs, to be deemed to be adulterated, and hence may not enter into interstate commerce. The nature of the defects to which attention was called related to (A) condition of cows; (B) condition of barns, (*a*) light, (*b*) ventilation, (*c*) general cleanliness; (C) conditions of cow yards, (D) water supplies, including exposure of wells to surface drainage, (E) milk-rooms; (F) care of milk and milk utensils, including (*a*) the handling, and (*b*) the storing of milk.

As to the inspection of slaughterhouses, and the manner of slaughtering of neat cattle, sheep, and swine, the legislature of 1909 passed a resolve authorizing and directing the State Board of Health to investigate the methods and circumstances of the slaughtering of neat cattle, sheep, and swine, and the inspection of the products thereof, and the operation of the laws, relating thereto, existing at that time, and to report the result of its investigation to the general court, on or before January 15, 1910, with such recommendations as the board might deem advisable. Acting in accordance with the provisions of the resolve, the board found that some of the laws relating to slaughtering were very generally ignored. Seventy persons, conducting the slaughtering business, had failed to apply for a license. In six towns, it was found to be the policy of the local board not to issue licenses for slaughtering, notwithstanding the state law to the contrary. Of one hundred and eleven proprietors of slaughterhouses found to hold no license for slaughtering, fifty-five were discovered in the act of slaughtering. Notwithstanding a state law, which provides for the presence of a meat inspector, or a member of the board, at the time of slaughter, two hundred instances were discovered where neither was present. In sixteen towns where slaughtering was conducted the state law was violated by failure on the part of the local authority to appoint a meat inspector. In thirty-nine instances diseases carcasses were discovered by state inspectors of health, and condemned at the time of slaughter, twenty-nine in the absence of a local meat inspector, and ten in the presence of a local meat inspector. In one instance the carcass had been stamped. One hundred and twenty-two carcasses were condemned by state inspectors of health. Seventy-six of this number were unstamped, and forty-six were diseased. In two hundred and fifteen instances the state inspectors of health found that it was the custom of the meat inspector, instead of being present at the time of slaughter, in accordance with the state law, to call later on the same day, and, in forty-six instances, on the same day or on the following day. In one hundred and sixteen cases evidence was found that the meat inspector was sent for previous to slaughtering, but that he did not appear until after slaughtering. In thirty-nine instances this was the customary procedure. In twenty-six instances it was found that the meat inspector was not sent for until after slaughtering, and that, consequently, he was not present at the time of slaughter. Thus it will be seen that in many cases carcasses were not legally inspected. Consequently, they were not condemned, even though showing evidence of disease. Various other violations of the law were discovered. In one hundred and two towns the meat inspector was either a veterinarian, butcher, or an experienced man, well qualified for his position. In fifty-five towns the meat inspector was a farmer, in seven a marketman, in three towns a cattle trader, and in three towns a milk producer. In thirty-three towns it was found that the meat inspector had ''no qualifications''; that he was ''not well qualified'' in four; that he was a ''practicing physician'' in three, and that the qualifications of the meat inspector in each of fifteen towns were as follows: Postmaster (formerly in meat business), clerk in employ of meat firm, shoemaker, unlicensed graduate in medicine, druggist, hotel-keeper, driver of town watering cart, paperhanger, machinist, grocer, plumber, night watchman, optician, and real estate agent. In making the investigations, the state inspectors of health visited more than seventy of the larger slaughtering establishments. Of this number about one third were distinctly objectionable, and six were conducting business without licenses. On the other hand, those establishments which, in the main, showed objectionable conditions, were the small slaughterhouses situated in the country districts, there being some one hundred and sixty which deserved the severest condemnation. The Board appended to its report a summary of conditions which should be required for the satisfactory conduction of slaughtering establishments, which is as follows:

1. Preferably, a building somewhat isolated, used only for slaughtering purposes. Slaughtering may, however, be conducted in a portion of a building which is properly separated, and securely partitioned from other sections of the building.

(*a*) The slaughter room should be so constructed, that walls and floor can be kept clean. The sides of the room, for a height of six feet or thereabouts, should be constructed of such material that they may be kept clean, and free from blood, manure and filth of any sort. The floor should be tight and even, so constructed (*e.g.*, drained toward center of room) that it may be easily and thoroughly scraped, and washed with scalding water.

(*b*) Some means should be provided for prompt and proper removal of blood, waste meat, and other refuse matter. Drainage water should go to sewers, or, in the absence of a sewerage system, through pipes properly trapped to covered cesspools, located at some distance from the building.

(*c*) Doors and windows should be screened in the fly season.

(*d*) Provision should be made for proper washing facilities, and water-closets.

(*e*) Hooks, trimming boards or shelves, poles, and other conveniences, should be washed with hot water after each usage, and all utensils should be kept clean.

(*f*) Knives, and other instruments used on diseased animals, or diseased portions of animals, should be sterilized in boiling water containing washing soda, for five minutes, before they are used again. (Few butchers keep their instruments clean. It is not an uncommon practice to cut into a tubercular gland, and then continue to dress the carcass with the same knife, without first cleaning it.)

(*g*) A suitable meat room or cooler should be provided, and should be kept clean. (Meat should not be hung in a slaughterhouse until taken to market.)

(*h*) The room for slaughtering should not be used as a tie-up for animals awaiting slaughter.

(*i*) Animals condemned because of disease, should not be slaughtered in the same place where animals are slaughtered for food.

(*j*) Cans for refuse matter should be of metal, and provided with covers.

2. An abundant supply of ice, and of pure water, preferably running water, hot and cold, should be provided.

3. The meat inspection and slaughtering rooms should be well lighted, and adequately ventilated, and there should be a suitable place for the meat inspectors to examine the viscera.

4. If there is a cellar, it should be kept dry and clean.

5. The yard and surroundings should be kept clean.

A plan of reorganization of slaughtering inspection work was submitted to the general court at the last session of the legislature, with the result that it was referred to the next session. The matter will, I believe, be taken up anew this coming year, with probable action on the part of the legislature.

Second, in 1886, a very important law was passed entitled "An act to protect the purity of inland waters," by which the general oversight and care of all inland waters (except the Connecticut River), and of all streams and ponds used by any city or town, or public institution, or by any water or ice company, as sources of water supply, and of all springs, streams, and water courses tributary thereto, were committed to the State Board of Health. The board was authorized to consult with and advise the authorities of cities and towns, and also corporations, firms, and individuals, with reference to existing or proposed systems of water supply and sewerage. From the fact that the State Board of Health has made examinations of public water supplies in so large a number of cities and towns in this State, and has kept, so constantly, a supervision over them, there can be no doubt that our public water supplies are exceptionally well protected. In order to keep well informed as to the condition of all water supplies in the commonwealth, the board causes supplies to be examined by its engineers, at frequent intervals, and, also, has samples of water from the various sources collected, from time to time, for analysis. For the purpose of making analyses, the board maintains a laboratory at the State House, in Boston, where, during the past year, about seven thousand samples of water, ice, sewage, and sewage effluence, were examined chemically and microscopically. The board is also authorized to conduct experiments to determine the best methods of purification and disposal of drainage or sewage, and, for this purpose, has established an experiment station at Lawrence. The station, since its establishment in 1887, has been under the constant supervision of Hiram F. Mills, A.M., C.E., member of the board. The station has been enlarged and improved from time to time. During the past twenty years about fifty thousand chemical and one hundred and fifty thousand bacterial examinations were made, and new and more accurate chemical, biological, and physical methods have been developed for the study of water, sewage, sand, soils, etc. Beginning with studies upon the purification of sewage and water, together with laboratory investigations upon nitrification, the causes of the reduction of bacteria by filtration, etc., the work of the station has grown constantly, and, at the present time, includes experimental investigations tending toward the development of scientific methods of sewage purification, of the treatment and purification of wastes from woolen and shoddy mills, tanneries, yeast factories, paper mills, and various other industries; as well as other special investigations in sanitary science. It may be said, fairly, that the investigations at the Lawrence Experiment Station laid the foundation for the scientific treatment of sewage, and gave the initiative for similar investigations, in this and other countries.

Since 1888, all acts of the general court, authorizing the installation of sewerage systems, have contained a clause making such systems subject to the approval of the State Board of Health. The board is further directed to examine, annually, all main outlets for sewers and drainage of cities and towns of the commonwealth, and the effect of sewage disposal, and shall, annually, report to the general court such legislation as it considers expedient for the preservation of the public health, and for the purification and prevention of the pollution of ponds, streams, and inland waters, of the commonwealth. Although the original act, placing all inland waters under the supervision of the board, provided only advisory powers, subsequent legislation has given mandatory powers to the board over certain streams. The board has also been granted certain powers, to require any action that may be necessary in order to secure the proper maintenance and operation of sewage disposal systems, so as not to cause the pollution of any stream or become a source of nuisance. The board may also prohibit the entrance of objectionable wastes into any sewerage system.

In addition to its regular work, the board has made many special investigations, from time to time, as directed by the general court. Among the more important of these special investigations were those in relation to the water supply and sewerage of the Metropolitan District, which includes Boston and the cities and towns in its immediate vicinity, and has a population of about 1,300,000. The investigations resulted, substantially, in the adoption of the recommendations of the board, at a cost of many millions of dollars. Among other investigations made by the board, whose recommendations relative thereto were accepted and embodied in subsequent legislation, were those with reference to the sanitary condition of certain rivers, the sewerage of certain towns, and the effects of the discharge of sewage into Boston harbor. From the point of view of public health, the most important accomplishment of the board through its state control of lakes and streams has been the practical disappearance of water-borne typhoid fever in the State.

In 1894, the present chairman of the State Board of Health, Dr. Henry P. Walcott, was led to consider the advisability of establishing a laboratory for the production and free distribution, under State supervision, of diphtheria antitoxin. In the autumn of that year, the production of the serum was begun in the laboratory of the State House. Massachusetts was thus the first State in the Union to provide for the distribution of diphtheria antitoxin, to anybody who needed it, whether rich or poor. In the following year, 1895, Professor Theobald Smith fitted up a number of laboratory rooms in the Bussey Institution, and himself took charge of the work as soon as the laboratories were ready, in the early summer. Under his personal direction, for a period of nine years, the production of diphtheria antitoxin was carried on in this institution. With the increasing demand for serum, culminating during the epidemic of 1901, the quarters in the Bussey Institution became more and more inadequate. In February, 1902, a bill was introduced into the Senate and the House, that the State Board of Health be authorized to produce antitoxin and vaccine lymph. During the session of 1903, the general court finally passed a bill, authorizing the State Board of Health to produce and distribute antitoxin and vaccine lymph. The corporation of Harvard University came to the aid of the State, and agreed to use a portion of the land of the Bussey Institution adjoining the Arnold Arboretum, and build a laboratory, in which the preparation of diphtheria antitoxin and animal vaccine could be carried on together. The amount of work carried on in this institution has been increasing every year. During the thirteen years and eight months ended November 30, 1908, 521,825 bottles of antitoxin were distributed to local boards of health, to hospitals, and to practitioners in Massachusetts. The increase in demand for antitoxin may be seen by the fact that during 1907, 64,807 bottles were distributed; in 1908, 94,645; in 1909, 90,131.

The total number of tubes of vaccine virus distributed by the board during the five years and two months ended November 30, 1909, was 197,769.

Cultures for diagnostic purposes and for release from quarantine, are received for examination from certain cities and towns which have no laboratories of their own, the total number of cultures received yearly averaging four or five thousand. Similarly, microscopical examinations are made of sputum, and other material suspected of containing the bacilli of tuberculosis. Beginning with the year 1896, and ending with the year 1909, 13,591 specimens were examined, and reported upon to local health authorities or physicians.

Other tests made, are for typhoid fever and malaria. During the year ended November 30, 1909, the Widal test was carried out with 830 specimens of blood. Of these specimens, fifty-four, or 6.5 per cent, gave a positive reaction. During the same year forty-three blood specimens were received, and examined for the presence or absence of the malarial parasite. Of these, five were positive, and thirty-eight were negative. The percentage of positive cases was 11.6.

For instructive purposes, we may properly speak of the pre-antitoxin and the antitoxin periods. Previous to the year 1895, in which antitoxin came into general use, in the State, the mean fatality during the three years preceding was 28.3 per cent (ratio of deaths to cases); and in the antitoxin period, 1895-1905, it was 12.4 per cent, or less than half as much.

In the antitoxin and vaccine laboratory, under the charge of Professor Theobald Smith, Pathologist to the State Board of Health, are conducted various pathological examinations and researches, as, for example, experimental researches in tuberculosis, with special reference to etiology, pathology, and immunity, investigation relative to epidemic anterior poliomyelitis, etc.

The next question calls for "special emphasis on the original and thorough work in factory inspection, through the system of paid medical inspectors."

Some of this work, viz., that relating to the prevention of the spread of tuberculosis, may be found on the printed pages which I have cut from a late report of the commission, upon a system of caring for tubercular patients.

A statement showing the manner of dealing with the statutes bearing upon factory hygiene, may be found on a page of the August 5, 1909, issue of the Boston and Medical Surgical Journal, which I enclose.

I also enclose a reprint of an article of my own, on the health of young persons in Massachusetts factories, and a reprint on the protection of factory employees, against dust arising from certain occupations. At the end of the latter (page 244), you will note a copy of the new act relative to the employment in dangerous trades, of minors under the age of eighteen years.

Hoping that the information will reach you in time to be of use, I am

Yours very truly,

Wm. C. Hanson,
Assistant to the Secretary, Massachusetts
State Board of Health.

EDITORIALS.

The Practical Operation of the Health Department.

The operation of a health department is a practical business, requiring the same qualities for successful administration as the conduct of a mill, or any other business, and the basic principles underlying the management of sanitary matters are no different from those governing the correlation of the forces of the shuttle, the loom, and the spindle, or of the furnace, the forge, and the anvil. Heretofore, sanitary adminsitration has, unfortunately, been largely considered on an altogether different basis. We have pased through the era of politics, when the conduct of health affairs was simply a dexterous method of separating the commonwealth from its bank account; through the ultra-scientific period, when it was considered that he who had the largest medical practice must of necessity be the best administrator of sanitary affairs; and have emerged into the clearer and saner cycle of public health development, wherein things are placed on the solid foundation of efficiency.

In the administration of health affairs, four things are requisite: brains, experience, money, authority.

Brains comprehends technical education for all the members of the department, whether they be laboratory workers, field operatives, clerks, or administrative heads. Each must be a specialist in his own line, and the department chief must have that rarest of all gifts, the executive faculty, whereby all the specialized parts of the public health machine are correlated, and harmonized into a powerful engine for the public weal.

Experience means utilized opportunity, the adaptation of ideas culled from books, and theories to practical situations. It means disillusion, the abandonment of false values, it begets self-confidence of the better sort, and cultivates the invaluable art of preparedness in the face of emergency. It gives reputation, without which health workers are embarrassed.

Money means power of certain sort, power to forestall and ward off disease through the investigation and eradication of the causes of its continuance, power to educate so that disease may be avoided. Thus, it means the employment of trained workers in every phase of the sanitary problem.

Authority is power of another sort, coming from the people to the health department. It means the regulation of the mass for the protection of each individual part of that mass. It is the "big stick" to be carried in silence but to be exhibited and used vigorously when necessary.

Brains and experience are individual attainments. They are too rare, especially in the new field of hygienic endeavor. They would be more common in that field, were it not that the commercial business pursuits offer much more substantial advantages, and far greater returns. It is no uncommon thing for superintendents of large business concerns to receive $25,000.00 per annum, yet men who are responsible for the health of an entire state, which, if reckoned on a purely commercial basis, would be valued into the billions, receive but a small fraction of that amount.

Money and authority are mass attainments, and are granted to health organizations by lawmakers representing the people. They are the fuel, and the oil, of the public health engine. Upon the first depends the securing of the best material for the machine; upon the second hangs the success of its operation.

Brains, experience, money, and authority, will solve any physical problem in the universe. These four, when backed by the invincible spirit of the desire to save human life, spell efficiency of the highest order in public health work, the efficiency of accomplishment, and of fulfillment, the efficiency which has made the world a better place to live in, the efficiency which has made for peace, happiness, and length of days.

JOHN F. LEINEN.

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JOHN F. LEINEN.

The Legislature and the Bubonic Plague.

It is hard to realize, in these happy, busy days in California, that there is any such problem as the Bubonic Plague. Even the health officer is tempted to hope that perhaps infected squirrels are, by some happy chance, not a source of danger. He greatly desires to laugh with the rest of the people when plague is mentioned seriously by the stranger, but he knows there is no scientific ground on which to rest any statement of safety, in the event of abandonment of the fight against the squirrel, and he knows that, if plague should suddenly reappear among the people as a widespread epidemic, the health officer will be held responsible; therefore he, persistently and patiently, urges the extermination of squirrels and the laboratory inspection of rats. The world of nations looks on, and says: the United States Government has charge of the work, and will do it well, therefore we will not worry about the plague reaching us, through California ports. Our sister states look on, and say: "We know the State Board of Health of California realizes the importance of eradicating plague, and will coöperate fully with the Federal Government, so we need not quarantine California, or inspect her commerce shipments." The members of the United States Congress say: "This plague is a big proposition that may involve the lives and prosperity of the people of the whole nation, therefore we will appropriate money to investigate its prevalence in California, and to aid in its eradication." The California Legislature of 1909, said ——? No one seems to know just what was said, but the Governor was left without any increase in the contagious disease fund being provided, and the State Board of Health has accordingly been unable to make the active progress it should have made, in eliminating this disease from our State.

What will the 1911 legislature do? The situation which confronts them is this: The Federal Government has stood sponsor for us with the various states and nations, thus averting any quarantine, and has worked out for use, at an expense of approximately $150,000 a year, the extent of the territory infected, and the methods of protecting ourselves, and our neighbors, from the spread of plague. Having done this much, congress practically says: "It is now up to you to kill the squirrels in this infected territory." The State Board of Health has announced, in the following letter, its intention of enforcing the act of March 13, 1909, for the extermination of rodents. When the first of February arrives, will the Board have any real authority to compel boards of supervisors to act? If not, the State Board has no funds upon which it may draw, to defray the expense of doing the work, and must report back to the other states, and to Washington, that it is powerless to do anything further!

August 6, 1910.

The County and City Officials and Residents of------------------------ County.

As a measure in the protection of the public health of California, and in the interests of unimpeded commerce and traffic with other states and nations, the legislature passed the "Act for the extermination of rodents," March 13, 1909.

Since the passage of this act, the State Board of Health has been coöperating with the United States Government in determining the extent of the bubonic plague infection among squirrels and other rodents, and in determining the best methods of exterminating them. The State Board has also been in conference with the United States Department of Agriculture, and with the appropriate committees in Congress, to determine how far federal aid might be extended in coping with this squirrel problem. The United States Department of Agriculture has no fund to aid the State in this work, and Congress has authorized no expenditure beyond the $14,000 per month which the Public Health and Marine-Hospital Service has appropriated, for determining the extent of the infected area. The work of this service has been conducted on a large scale, and the determinations made are accurate. California now has the information upon which to proceed.

The funds available for the State Board of Health are limited, and would not permit the Board to undertake the extermination of squirrels even in one county; moreover, it is not the function of this Board to undertake to do such a thing. The act of March 13, 1909, entitled an "Act for extermination of rodents," specifically requires all citizens in any way concerned, "at once to proceed and to continue in good faith to endeavor to exterminate and destroy such rodents, by poisoning, trapping, and other appropriate means." The act provides terms under which boards of supervisors, and city councils, are authorized to use funds for this purpose, and to undertake the work in their several jurisdictions. The expense of the work is to be paid by the county or municipality in the first instance, and becomes a charge against the land.

The importance of controlling this infection among squirrels is not alone a matter of protecting the lives of California citizens, or of protecting our large cities from quarantine of shipping by water and rail, but it is of importance as a means of obtaning concerted action in ridding the state of one of the most serious pests with which the California farmer has to deal.

PLAN FOR ENFORCEMENT OF THE LAW.

The State Board of Health, in conference with the United States officers, has determined upon the following plan of procedure, as promising efficiency and fairness in enforcing the law for the extermination of rodents:

1. County boards of supervisors to be formally requested to enforce this law, and to take all necessary measures to fully notify all land owners in their respective counties of their intention to enforce it.
2. Through coöperation with the United States Public Health and Marine-Hospital Service, expert advice to be provided on the best and most inexpensive methods of exterminating squirrels in the various portions of each county.
3. Property owners to be given until January 31, 1911, to exterminate the squirrels on their property.
4. Upon that date property owners who have not complied with the law, or upon whose property evidence of squirrels is found, to be warned by the supervisors and granted one month extension of time.
5. On February 1st a final inspection to begin. All property not found clear of squirrels to be condemned, and officers specified by the supervisors to be instructed to immediately begin the extermination of the squirrels remaining at that time.
6. This final work of extermination to be done in accordance with the law providing that all expenses shall be paid from the county and city treasuries and charged as liens against the property concerned.

The State Board of Health believes that these plans will provide for simultaneous and effective action among land owners.

PROVISIONS FOR NECESSARY FUNDS.

Boards of supervisors and trustees of incorporated districts should note that the law provides that "The expense thereof (for the extermination of rodents) shall be a charge against the county, city and county, city or town, wherein work is done, and the board of supervisors or other governing body shall allow and pay the same." The law further provides means whereby these governing bodies may collect from property owners the money thus expended, but funds should be appropriated to cover the immediate payment of these claims as presented by those who may be designated to do this work in each county.

In order to provide for such immediate payments the boards of supervisors may "levy a special sanitary tax," passed by the California legislature and approved March 25, 1909. This act specifically authorizes the supervisors of each county to levy a one-half mill tax on every dollar of the assessed valuation of all property outside of incorporated districts, for the purpose of preventing the importation of dangerous communicable diseases, and for the control of such diseases already existing in the respective counties.

The State Board of Health respectfully suggests that this levy should be included in the taxes to be levied in September, 1910.

In conclusion, the State Board of Health desires to emphasize on the one hand the grave danger to life and commerce if plague should spread further, and on the other hand the great opportunity which is offered to exterminate the squirrels by simultaneous enforcement of this law by all counties. No practical supervisor in California needs figures to show him what a tremendous destruction of property and crops is due to squirrels. The State Board of Health is primarily interested in matters which cause, directly or indirectly, the destruction of human lives or health, but it believes that in making this formal request the economic advantages of enforcing this act for extermination of rodents should be duly considered.

If more legislation is necessary it should be enacted if we are to escape future trouble.

WILLIAM F. SNOW.

The Mosquito Campaigns and State Legislation.

It is only necessary to show the public the efficacy of sanitary procedures, in order to win their hearty coöperation. This has been demonstrated so many times, that it has become a maxim to those who are exerting their best efforts toward the elimination of disease. A convert won creates a nucleus for the dissemination of the great truths of sanitation, and the seeds which are thus implanted come to quick fruition. It is a great satisfaction to the State Board of Health to know that a large body of the state's best citizens are not only attentive to these important questions, but that they are also ready themselves to act, and are urging our health officials to greater efforts. The mosquito campaigns have attracted wide attention, and the interest which has been evoked is well shown in the letter which is printed below. There should undoubtedly be some legislation on this important subject.

The Attorney for the Board has suggested the feasibility of adopting the principle of the road construction laws to the needs of mosquito extermination. Assemblyman Guill, of Chico, is considering the advisability of providing the State Board of Health with funds for making a survey of any portion of a county, upon request of the citizens of a community, in order to show them just where, and how, to direct the local fight. These two suggestions might well be combined into an effective measure which would result in great good to California.

CALIFORNIA STATE MINING BUREAU.
SAN FRANCISCO, December 16, 1910.
Dr. Martin Regensburger, President State Board of Health, San Francisco, Cal.

MY DEAR SIR: As a citizen who is interested in the health of the people of the State, and one who is interested particularly in the suppression of the mosquito nuisance, I have thought it possible that some legislation might be enacted at the coming legislature, which would serve to eliminate this evil.

As you know, one of the most prolific breeding places of the mosquito is in the marsh or tide lands surrounding San Francisco, and other bays of the State, and an annual warfare is necessary wherever these pests thrive. In many cases the owners of these tide lands refuse to build necessary levees or construct drains which would prevent the collection of stagnant, mosquito breeding pools. I think it will not be questioned that a well known principle of law could be applied to these cases —that no one should so maintain his property as to prove a menace to his neighbor. Therefore, if such a law were constitutional, would it not be possible to draft an act which would make it compulsory upon the owners of tide or other marsh lands *near settled communities*, to either construct permanent levees or drainage channels which would prevent the accumulation of waters which would become stagnant.

I recognize the fact that this is a large proposition to handle, and one which would require much consideration. When it is considered, however, that, in various places in this State, thousands of citizens suffer annually from the mosquitoes, which are bred mostly on lands belonging to individuals and corporations, and when said sufferers are obliged annually to secure public subscriptions for the purpose of correcting the evil, it will be understood that strenuous methods are necessary.

It is needless to dwell upon the harmful effects of the mosquito, but his extermination, like that of the housefly, is something we are all interested in. Campaigns of education are well enough in their way, but campaigns of legislation are better, and, in my opinion, better results can be obtained by forcing the owners of immense tracts of tide lands to take proper action, as above outlined, than by any appeals which may be made to them. Some of the counties in this State have passed local laws, while adjacent counties have not; therefore, I claim that there is need for State legislation.

As the subject is out of my line, except as a sufferer, I am calling the matter to your attention, believing that it should be handled by the State Board of Health. I believe, further, that it is a subject in which the majority of the citizens of the

State are interested. If this matter can be considered, and I can render any personal assistance, I shall be glad to offer my services.

Trusting it will receive your consideration, I remain,

Yours very truly,

(Signed) L. E. Aubury,
State Mineralogist.

This is but one of many letters which the Board has received, suggesting that active measures should be directed against the needless and costly pest of mosquitoes—costly in lives and illness, as well as good nature and screens.

Raymond Russ.

The Teaching of Hygiene in the Public Schools.

The State Board of Health believes that it has succeeded, far beyond the most sanguine expectations, in bringing home to quite a body of the public the great lessons of sanitary science. Each day, each month, it becomes much easier to impress upon people the importance and necessity of sanitary rules.

When the plague was raging in San Francisco, and a great campaign of education was carried on by those in charge, a remark was made by one of the leaders that sanitation would never gain its desired ends until the subject became a part of the regular public school curriculum. This has been done in some places, and the result of teaching these general truths to children has already made itself manifest. It is quite surprising to see how teachers, with a few general lessons, have grasped the meaning of this work and how well they are imparting it to their pupils. During the past year, representatives from the Board have spoken before a great many teachers' institutes in this State, and their remarks have been given the most careful attention. Possibly, we can count this increase in interest as the greatest result of the past year's work.

Tuberculosis Activity.

As the year closes, it is well to carefully consider the progress which has been made in each line of health work, and to compare it with that of preceding years. Tuberculosis far exceeds all other activities in the wonderful results which have been accomplished. In the United States, sixteen state sanitorias, twenty-eight county hospitals, and twenty-one municipal hospitals, all exclusively devoted to tuberculosis patients, have been erected and equipped since the first of January, 1909. In the last two years, the number of state institutions for the treatment of these afflicted people has just doubled, while the number of county and municipal institutions has increased from 30 to 80. The expenditure for this purpose has more than doubled during this period. In 1909, $3,000,000 was appropriated by various states for tuberculosis institutions. During this year, forty-three legislatures convened. In 1910, only eleven legislatures have been in session, but over $600,000.00 has been appropriated for tuberculosis sanatoria. In the last two years, official appropriations from all sources will amount to $6,000,000, and of this sum $2,500,000 has been given by cities and counties. This is certainly a wonderful record of achievement, and what has been done with those who are afflicted with this terrible, yet fortunately ever decreasing malady, can be accomplished in other lines as well.

The Open Window.

The San Francisco "Chronicle," in an excellent editorial on the "Closed Window," quotes a Cambridge physician as follows:

> "We shall never really get the upper hand of the 'white plague' with our anti-spitting crusades, nor our sanatoriums. nor our out-door schools, nor our campaign of popular education, until as a people we are willing to ventilate our houses with real air, by day and by night. It is appalling to think how many intelligent persons, large contributors to the anti-tuberculosis societies, still think that a room which had the windows opened for an hour in the morning is quite fresh enough for two persons to sleep in the night through, without disturbing the window sash, or who feel that a capful of 'night air' introduced through the modifying warmth of a room adjoining the sleeper is all that a discreet disciple of the fresh-air cure need be expected to undergo. No, we shall never root out the plague till we get at the last self-coddler with his head under the bedclothes."

The "Chronicle" also says that what is stated of the sleeping room can very well apply to offices and workshops. Unfortunately, this is only too true, and a public, which has a knowledge of the principles of tuberculosis and how this disease is acquired, has not as yet learned the personal application of these truths. There is room for argument concerning the "open door" as our national policy, but there can be no argument about the open window. Many believe that if a window is open in an adjoining room, it furnishes all the air that is necessary for sleeping purposes. This is far from being the truth, and those who have been in the habit of sleeping outdoors, or sleeping with an abundance of air in their bed-chambers, can heartily testify to the rejuvenation which the night's rest brings. Sleeping porches are steadily increasing in popularity in our State, where balmy nights and health giving breezes are so common that to sleep in doors, at any time of the year, is hardly necessary.

If the public would only discover that surcease of headaches, invigoration, and, in consequence, mental alertness and physical well being, are the accompaniments of the open window, we would not have so frequently the disease breeding bed-chamber to contend with.

[Reprint in Grass Valley Union, January 4, 1911, from Los Angeles Express.]

A BABY'S WORTH.

(The California State Board of Health has found that the cost of raising a babe from birth to its twentieth year is $4,150.)

What is the worth of a baby's smile?
  Give me the figures in money, man,
Name me its value in gold, the while
  You snuggle the wee one, if you can.
Tell me the worth of the rosy kiss
  As fresh and pure as the morning dew?
What is the price of a joy like this?
  What is it moneyed worth to you?

What is the worth of the sweet embrace,
  When wee arms cling in a glad caress,
And a velvet touch of a baby face
  Against your own you can fondly press?
What is your price for the restless tongue
  That chatters on in its baby glee?
And the little song at the even sung—
  Who'll calculate what its worth may be?

What is the price of the eyes that shine
  Their merriest glances into your own
And the little fingers that oft entwine
  About your neck as you sit alone?
Who'll name the cost of the little heart
  Which beats the love it is giving there?
Who'll put a figure, in whole or part,
  On a single curl of the golden hair?

What is the worth of the first step made,
  As the baby feet leave the mother's side,
And bravely, joyfully, unafraid,
  They toddle forth with no hand to guide?
How shall we reckon the cost in gold
  Of the tears, the joys and the childish ills?
What is the value? And who has told
  The price of the laughter which stirs and thrills?

What is the worth of a baby, pray?
  Give us the figures in gold once more?
Name us the price you would gladly pay
  For the lisp of a voice which has "gone before?"
What is the worth of the whispered prayer
  You used to hear in the eventide?
What would you pay for a smile so fair
  From the face of the babe which has lately died?

—E. A. Brininstool, in Los Angeles Express.

[Editorial, Whittier News, December 28, 1910.]

"In the first place there are no average babies. . . . The parents of these classified and tabulated infants have something to say, and their views on the matter must be entitled to as much consideration as those of the two sociologists. In making their appraisements, Dr. Snow and Professor Carver have not paid the slightest attention to the valuation placed upon the babies by their parents. . . . It may be that one or several of these tabulated babies may upset all the calculations of the sociologists, and raise the aggregate valuation several hundred per cent. For instance, the California baby crop of 1909 may contain one potential Carnegie or Rockefeller, who will make Dr. Snow's valuation of a couple of million for the whole crop look foolish."

This may be true, but it is very possible that this "potential Carnegie" has already died among the 3480 of these priceless little lives which have been sacrificed in 1910, largely because we have felt too poor to provide pure milk, and water, and all the rest of the things which must be safe-guarded, at public expense, if the individual parents are to raise their children to strong manhood and sweet womanhood.

In theory and sentiment, the truth about the value of life may be well stated in the effective lines of the parallel column, but, in practice, the appropriations of the legislature and county and town governments show that the people believe in spending from three to ten or even one hundred times as much on protecting the health of trees and live stock, as they spend on protecting the health of babies.

There is only one way to push health conservation rapidly to the position of prominence which it deserves, that is to convince the people that it is a business proposition and must be provided with men and money, just as any other big business enterprise is similarly provided.

The present issue of the Bulletin contains sufficient proof of the soundness of the proposition that between 5,000 and 10,000 lives each year may be saved by spending $100,000 to $500,000 per year on health conservation and administration. No doubt every one believes the verses in the adjacent column express the values of human life in better terms than money values, but they should not make the mistake of thinking that sanitation and public health measures can be made effective without adequate funds.

PURE MILK FOR CALIFORNIA.

The various organizations in the larger cities of the State, that are interested in obtaining clean, pure milk for the city, have considered, at length, means at their command to persuade the judges of the local courts to fine, adequately, those guilty of milk adulteration. In Massachusetts, the courts report fines of $40.00 for watering milk, while in San Francisco multiple offenses are either excused or a very small fine is imposed. By such fines, infractions of our State and National Pure Food Law are encouraged. Dairy conditions, however, are constantly under supervision, and are tending steadily toward improvement.

Association of Collegiate Alumnae.
(1) Weighing the baby; (2) A rickety baby in home of foster-mother one week after being turned over to the care of Children's Agency; (3) The nurse and the same baby one month later at Baby Clinic.

The system inaugurated by the last Board of Health of San Francisco is being followed assiduously by the present Board. A city license is required of all dairies sending milk into the city, and such dairies are checked off on a map of the State, by means of blue pins. If unsatisfactory conditions exist in these dairies, yellow pins are substituted for the blue, and if the dairies are not wholly bad, but are deficient in certain ways, red pins are used. It is found that there are very few yellow pins upon the map at present, while the class marked by red pins includes about two thirds of the dairies.

The various milk and baby hygiene associations, together with the

California Club of San Francisco, intend to urge upon our legislature the necessity for a thorough study of bovine tuberculosis. The members of these bodies feel that legislation should only come as a result of careful study of existing conditions, and it is their earnest hope that the bill which is introduced will meet with the support it deserves.

The Medical Milk Commission of the San Francisco County Society is actively at work in spreading the gospel of pure, clean milk as a means of preventing infant mortality, as well as a necessity for the sick. It is hoped that, sooner or later, the world will appreciate that clean milk is a necessity, and not a luxury. San Francisco, in proportion to its size, is more appreciative of certified milk than other communities. Some 2,000 quarts are sold in the city daily, and there are many inquiries from dairies as to the requirements for certification, with a view to their entering the field as producers.

Clinic Day. Association of Collegiate Alumnae.

The Milk Commission and the Committee on Public Health of the San Francisco County Medical Society, are preparing to give illustrated lectures on dairy conditions before audiences gathered at public school centres, under the new lecture extension system of the public schools. The commission will own a set of lantern slides covering general dairy conditions, and those of certified dairies.

The Certified Milk and Baby Hygiene Committee of the Collegiate Alumnæ are diligently guarding the health of many infants. Some eighty-five babies gather weekly at the babies' clinic of the Associated Charities. They are weighed, recorded, and their formulas altered, as necessity arises. *In a year of such supervision, with certified milk for food, no death has occurred from gastro-intestinal disease among the one hundred and thirty-five babies treated.* This is indeed astonishing. On scanning health reports, one finds gastro-intestinal diseases leading the list of causes of death among children under one year of age.

This committee hopes, during the coming year, to open consultation stations in the more thickly populated sections of this city, in order to teach the care of infants. In this way, they expect to correct many of the difficulties which mothers meet with in caring for their infants during the first year of life. In no way is the territory of the physician invaded, for the child is not prescribed for medically. *To teach mothers the principles of motherhood is certainly a great work.*

RAYMOND RUSS,
Director, Bureau Public Health Information.

Ho! The Lighthouse.
(Reproduced by courtesy of the San Francisco Examiner.)

DEPARTMENT REPORTS.

REPORT OF THE BUREAU OF VITAL STATISTICS FOR NOVEMBER.

George D. Leslie, Statistician.

FIVE-YEAR REVIEW, 1906 TO 1910.

In comparison with the estimated midyear population* of California for the five years 1906 to 1910, inclusive, there are presented herewith the annual birth, death, and marriage totals, together with corresponding rates per 1,000 population, the totals and rates for 1910 being calculated as for the whole year from returns of the first eleven months.

*With the publication of the Federal Census results for 1910, population estimates for preceding years can be revised with strict accuracy on the basis of State and county totals for June 1, 1900 and April 15, 1910, the estimates being made for the sake of uniformity as of July 1, or the middle of each year. The estimated midyear population has been calculated on the assumption that the numerical increase (or decrease) was the same each month between June 1, 1900 and April 15, 1910 and also on the assumption that the numerical gain has continued to be the same each month since April 15, 1910, no further deduction having been made to July 1, 1910 for the ten small counties showing decreases between 1900 and 1910.

Estimated Midyear Population, Births, Deaths and Marriages, and Rates per 1,000 Population for California: 1906 to 1910.

	1910.	1909.	1908.	1907.	1906.
Estimated midyear population	2,396,639	2,306,001	2,215,615	2,125,240	2,034,861
Annual total—					
Births	32,006*	30,882	28,077	24,674	20,974
Deaths	31,772*	30,985	31,287	31,095	29,303
Marriages	24,623*	22,917	21,739	23,005	21,317
Rate per 1,000 population—					
Births	13.4*	13.4	12.7	11.6	10.3
Deaths	13.3*	13.4	14.1	14.6	14.4
Marriages	10.3*	9.9	9.8	10.8	10.5

*Totals and rates for 1910 calculated as for whole year from returns for January to November, inclusive, viz.: Births, 29,288; deaths, 29,074; and marriages, 22,532.

This table shows that each year since 1906 births have increased both absolutely and relatively, the successive gains being due mainly to growing completeness of birth registration in California. The birth total rose from only 20,974 in 1906 to 24,674 in 1907, 28,077 in 1908, 30,882 in 1909, and probably 32,006 in 1910. Similarly, the birth rate per 1,000 population was merely 10.3 for 1906, but 11.6 for 1907, 12.7 for 1908, 13.4 for 1909, and 13.4, also, for 1910.

The death total, however, has both risen and fallen between 1906 and 1910, while the death rate has decreased, generally speaking, having been 14.4 for 1906 and 14.6 for 1907, but only 14.1 for 1908, 13.4 for 1909, and probably 13.3 for 1910.

It may be noted that while in 1909 the birth total fell short of the death total by 103 (30,882 births against 30,985 deaths), there is an excess of births over deaths of 214 for eleven months of 1910 (29,288 births as compared with 29,074 deaths).

The marriage total, like the death total, has fluctuated in the period 1906 to 1910, and the marriage rate per 1,000 population likewise dropped from 10.5 in 1906 and 10.8 in 1907 to only 9.8 in 1908 and 9.9 in 1909, rising again to about 10.3 in 1910.

Returns for the first eleven months indicate that 1910 will show by far the highest totals in births, deaths, and marriages ever reported for California under the present law for the registration of vital statistics.

VITAL STATISTICS FOR NOVEMBER.

Marriages.—The marriages reported for California in November total 2,290, as compared with 2,078 for the same month last year. For an estimated midyear population of 2,396,639 in 1910 (based on the census total of 2,377,549 for April 15th), the November total represents an annual rate of 11.6 per 1,000 inhabitants, or the same as the corrected rate for October.

The monthly totals were highest for the following counties: Los Angeles, 512; San Francisco, 460; Alameda, 218; Santa Clara, 97; Sacramento, 95; Marin, 83; Fresno, 79; Orange, 78; and San Diego and San Joaquin, each 61.

The aggregate for San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo) was 806.

Births.—For California in November there were reported 2,558 living births. This total represents an annual birth rate of 13.0 for an estimated midyear population of 2,396,639, against a corrected rate of 14.1 for the preceding month. The corresponding total for the same month the year before was 2,584.

The totals were highest for the following counties: Los Angeles, 632; San Francisco, 561; Alameda, 277; Sacramento, 113; Fresno, 85; Santa Clara, 84; San Diego, 72; and San Bernardino, 58.

Altogether 1,645 births were registered in the twenty-six freeholders' charter cities, the leading cities being as follows: San Francisco, 561; Los Angeles, 479; Oakland, 170; Sacramento, 76; Berkeley, 46; Fresno and San Diego, each 40; Alameda, 34; Pasadena, 27; and Long Beach and San Jose, each 26.

The aggregate for San Francisco and the transbay cities (Alameda, Berkeley, and Oakland) was 811, and for San Francisco and the other bay counties was 898. Similarly, the total for Los Angeles and neighboring chartered cities (Long Beach, Pasadena, and Santa Monica) was 539, and for the entire county was 632.

Deaths.—Exclusive of stillbirths, altogether 2,660 deaths were reported for November, this number including 152 delayed certificates for deaths in October and earlier months. For an estimated midyear population of 2,396,639, the 2,660 deaths give an annual death rate of 13.5, as compared with a corrected rate of 13.1 for the preceding month. The corresponding total for the same month last year was 2,612.

The November totals were highest for the following counties: Los Angeles, 551; San Francisco, 525; Alameda, 261; Sacramento, 108; Santa Clara, 101; Fresno, 86; San Diego, 79; San Bernardino, 68; San Joaquin, 72; Napa, 55; and Sonoma, 50.

There were altogether 1,487 deaths in the twenty-six chartered cities, the highest totals being as follows: San Francisco, 525; Los Angeles, 353; Oakland, 158; Sacramento, 72; San Diego, 55; Fresno, 42; San Jose, 37; Stockton, 31; and Berkeley and Pasadena, each 29.

The aggregate for the urban district (San Francisco and the transbay cities) was 731, and for the entire metropolitan area (San Francisco and the other bay counties) was 853. Similarly, the total for Los Angeles and neighboring chartered cities was 413, and for the whole county was 551.

Causes of Death.—The following table shows the distribution of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths for Current and Preceding Month, for California: November.

Cause of Death.	Deaths: November.	Proportion per 100,000.	
		November.	October.
ALL CAUSES	2,660	1,000.0	1,000.0
Typhoid fever	44	16.5	19.0
Malarial fever	10	3.8	7.5
Measles	3	1.1	0.4
Scarlet fever	4	1.5	2.6
Whooping-cough	10	3.8	4.8
Diphtheria and croup	22	8.3	8.2
Influenza	4	1.5	1.1
Other epidemic diseases	19	7.1	7.1
Tuberculosis of lungs	333	125.2	114.8
Tuberculosis of other organs	50	18.8	16.4
Cancer	175	65.8	66.0
Other general diseases	98	36.8	40.6
Meningitis	25	9.4	8.2
Other diseases of nervous system	247	92.9	76.8
Diseases of circulatory system	395	148.5	142.0
Pneumonia and broncho-pneumonia	200	75.2	64.1
Other diseases of respiratory system	69	25.9	22.0
Diarrhea and enteritis, under 2 years	91	34.2	49.6
Diarrhea and enteritis, 2 years and over	26	9.8	13.4
Other diseases of digestive system	128	48.1	62.2
Bright's disease and nephritis	183	68.8	68.6
Childbirth	29	10.9	9.0
Diseases of early infancy	102	38.3	35.8
Suicide	56	21.1	23.5
Other violence	205	77.1	82.6
All other causes	132	49.6	53.7

For November there were reported 395 deaths, or 14.9 per cent of all, from diseases of the circulatory system, and 383, or 14.4 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis somewhat.

Other notable causes of death in November were: Diseases of the nervous system, 272; diseases of the respiratory system, 269; violence, 261; diseases of the digestive system, 245; Bright's disease and nephritis, 183; cancer, 175; and epidemic diseases, 116.

The deaths from epidemic diseases were as follows: Typhoid fever, 44; diphtheria and croup, 22; malarial fever and whooping-cough, each 10; and all other epidemic diseases, 30. Typhoid fever was the leading epidemic disease for November, as for the preceding five months.

The deaths from the four leading epidemic diseases reported for November were distributed by counties as follows:

Typhoid Fever.	
Alameda	2
Butte	2
Contra Costa	1
Fresno	3
Glenn	2
Humboldt	1
Kern	1
Los Angeles	8
Nevada	1
Orange	1
Sacramento	2
San Bernardino	2
San Diego	1
San Francisco	6
San Joaquin	2
San Luis Obispo	1
Santa Clara	2
Santa Cruz	1
Tulare	3
Ventura	2
Total	44

Diphtheria and Croup.	
Alameda	3
Contra Costa	1
Fresno	2
Los Angeles	5
Sacramento	3
San Francisco	2
San Joaquin	2
San Mateo	1
Santa Cruz	1
Tulare	1
Yolo	1
Total	22

Malarial Fever.	
Alameda	1
Kern	2
Los Angeles	1
Sacramento	1
San Francisco	1
Tehama	3
Yolo	1
Total	10

Whooping-Cough.	
Alameda	2
Humboldt	1
San Francisco	1
San Joaquin	3
Santa Clara	1
Solano	2
Total	10

Geographic Divisions.—Data for geographic divisions, including the metropolitan area, or "Greater San Francisco," are as follows:

Deaths from Main Classes of Diseases, for Geographic Divisions: November.

Geographic Division.	Deaths: November.										
	All Causes	Epidemic Diseases	Tuberculosis (All Forms)	Cancer	Diseases of Nervous System	Diseases of Circulatory System	Diseases of Respiratory System	Diseases of Digestive System	Bright's Disease and Nephritis	Violence	All Other Causes
THE STATE	2,660	116	383	175	272	395	269	245	183	261	361
Northern California	353	14	33	18	61	51	40	31	13	41	51
Coast counties	178	4	19	11	42	22	20	11	9	18	22
Interior counties	175	10	14	7	19	29	20	20	4	23	29
Central California	1,523	75	195	97	124	236	158	155	127	151	205
San Francisco	525	14	67	48	33	96	45	61	52	49	60
Other bay counties	328	15	45	20	39	53	29	22	24	37	44
Coast counties	175	8	17	6	12	33	27	19	16	10	27
Interior counties	495	38	66	23	40	54	57	53	35	55	74
Southern California	784	27	155	60	87	108	71	59	43	69	105
Los Angeles	551	17	102	48	60	73	47	46	28	52	78
Other counties	233	10	53	12	27	35	24	13	15	17	27
Northern and Central California	1,876	89	228	115	185	287	198	186	140	192	256
Metropolitan area	853	29	112	68	72	149	74	83	76	86	104
Rural counties	1,023	60	116	47	113	138	124	103	64	106	152

REPORT OF PURE FOOD AND DRUG LABORATORY FOR NOVEMBER.

PROFESSOR M. E. JAFFA, Director.

During the past month the work of the laboratory has been along miscellaneous lines, including the examination and analysis of extracts, eggs, meats, beverages, confectionery, and drugs. In many instances eggs which were from four to eight weeks old, and in some cases more, have been sold as fresh eggs.

Certificate No.	Material.	Violation.	Name of Dealer.	Locality.
1021	Green's headache powders	Mislabeled. Acetanilid	Dean's drug store	Santa Ana
1028	Headache cure	Mislabeled. Ethyl alcohol and acetanilid	Dean's drug store	Santa Ana
1039	Chopped meat	Adulterated. Sulphur dioxide	Archambault Bros.	Stockton
1078	Chopped meat	Adulterated. Sulphur dioxide	Wood Bros.	Monterey
1083	Mustard	Adulterated. Wheat flour and curcuma	Cochran-Navlet Co.	San Francisco
1085	Orange drops	Mislabeled. Coal-tar color	Owl Drug Co.	Los Angeles
1086	Raspberry snows	Mislabeled. Coal-tar color	Owl Drug Co.	Los Angeles
1087	Headache tablets, "Aikure"	Mislabeled. Acetanilid	Pasadena Prescription Pharmacy	Pasadena
1088	Headache powder, "Beecham's"	Mislabeled. Acetanilid	Sun Drug Co.	Pasadena
1089	Headache wafers, Dr. Hobson's	Mislabeled. Acetanilid	R. H. Smith Drug Co.	Los Angeles
1090	Headache chocolates	Mislabeled. Acetanilid	S. A. Harper's Pharmacy	Los Angeles
1091	Headache tablets, "Electric"	Mislabeled. Acetanilid	H. E. Howard	Los Angeles
1092	Fresh eggs	Mislabeled. Not fresh	A. Quilici	San Francisco
1093	Fresh ranch eggs	Mislabeled. Not fresh	S. Facelli	San Francisco
1094	Fresh local eggs	Mislabeled. Not fresh	Hill's Grocery and Market	Los Angeles
1096	Fresh eggs	Mislabeled. Not fresh	F. H. Clark	San Francisco
1097	Fancy ranch eggs	Mislabeled. Not fresh	Eugene McCoy	San Francisco
1098	Egg compound	Mislabeled. Amount of dry material	Cream Mello Mfg. Co.	Los Angeles
1099	Oyster cocktail	Mislabeled. Benzoates	Creciat Bros.	Los Angeles
1100	Strawberry syrup	Mislabeled. Benzoates	Wistaria Sweet Shop	Los Angeles
1102	Sweet pickles	Mislabeled. Benzoates	E. Keup	San Francisco
1105	Chopped meat	Adulterated. Sulphur dioxide	Yick-Lung & Co.	Oakland
1107	Cider vinegar	Mislabeled. Below standard	A. Crawford	Los Angeles
1108	Hall's balsam for the lungs	Mislabeled. Ethyl alcohol	Boswell & Noyes	Los Angeles
1109	Kopp's baby friend	Mislabeled. Ethyl alcohol and morphine	L. F. Baas	Los Angeles
1110	Cloves	Adulterated. Clove stems and considerable refuse	Blevins & Harmon	Santa Paula

Laboratory Examinations and Analysis—*Continued.*

Certificate No.	Material.	Violation.	Name of Dealer.	Locality.
1111	Bromo laxine	Mislabeled. Acetanilid	Geo. A. Tilt (Gardena Pharmacy)	Los Angeles
1113	Chamberlain's colic remedy	Mislabeled. Ethyl alcohol, chloroform, and opium	Los Angeles Drug Co.	Los Angeles
1114	Sweet pickles	Mislabeled. Benzoates	Del Monte Delicatessen	San Francisco
1116	Rice	Mislabeled. Glucose and foreign mineral substance	J. D. Schwartz	San Francisco
1117	Rice	Mislabeled. Glucose and foreign mineral substance	J. J. Dyer & Co.	San Francisco
1120	Fresh eggs	Mislabeled. Not fresh	E. P. Shaddick	San Francisco
1121	Fresh eggs	Mislabeled. Not fresh	Peter Gaffrees	San Francisco
1122	Fresh eggs	Mislabeled. Not fresh	M. J. O'Looney	San Francisco

The following food inspection decisions have been received at the laboratory since the publication of the last Bulletin. Full copies may be obtained by addressing the director of the State Food and Drug Laboratory, Berkeley, Cal.:

FOOD-INSPECTION DECISION NO. 128.

SAGO AND TAPIOCA.

It has come to the attention of the Board of Food and Drug Inspection that there exists among the trade, in various parts of the United States, a very general misunderstanding with respect to sago, and small pearl tapioca. Sago is prepared from the starch obtained from the pith found in the stem of several species of palm trees, natives of the East Indies, and tapioca is prepared by heating in a moist state the starch made from the root of the cassava or tapioca plant, which is indigenous to certain South American countries. Both products ordinarily reach the consumer in granulated form, and are designated as "pearl sago" and "pearl tapioca," respectively. While "pearl sago" and "pearl tapioca" are separate and distinct articles of commerce, each resembles the other closely in appearance, and fine pearl tapioca frequently has been labeled and sold as sago.

Under the Food and Drugs Act of June 30, 1906, articles of food are misbranded if the labels or packages contain statements which are false or misleading, or if particular articles are imitations of, or offered for sale under, the distinctive names of other articles. In the opinion of the Board, the name "sago," or "pearl sago," without qualification, means the product obtained from the pith of East Indian palm trees, and starch products of different origin will be held to be misbranded under the act, if labeled or offered for sale as "sago," "pearl sago," etc. The prepared starch product derived from the root of the cassava plant is tapioca, and should be sold and labeled as such.

There is also on the market, an imitation sago made from potato starch. Imitation food products are misbranded under the act unless they are labeled so as to indicate plainly that they are imitation products, and unless the word "imitation" is also plainly stated on the packages in which imitation products are offered for sale. Potato or other starch prepared to resemble pearl sago, therefore, should be labeled, for example, "Imitation sago. Made from potato starch," the words, "Imitation" and "Made from potato starch" being declared as plainly and conspicuously as the word "sago." The word "Imitation" must appear on the label, but an equivalent expression may be substituted for "Made from potato starch," which will indicate, unmistakably, that the product is not made from the pith of East Indian palm trees, but is deprived from a different source.

FOOD INSPECTION DECISION NO. 129.

THE CERTIFICATION OF STRAIGHT DYES AND MIXTURES UNDER SECONDARY CERTIFICATES. (AMENDMENT TO F. I. D. 77.)

In Food Inspection Decision 77, provision is made for the recertification of straight dyes, *i. e.*, the seven accepted dyes of F. I. D. 76) and mixtures thereof, with or without other harmless ingredients.

Doubt has been expressed as to whether the requirements of F. I. D. 77, with respect to certification, are the same for those who are not manufacturers as they are for manufacturers. This amendment is issued relative to recertification, in order to remove uncertainty, and to indicate the scope of F. I. D. 77.

All persons, manufacturers or others, requesting certification of mixtures or recertification of straight dyes, or of mixtures or combinations thereof, shall submit the following form of secondary certificate to the Secretary of Agriculture.

SECONDARY CERTIFICATE.

I, --------, residing at --------------, do hereby depose and state that I have
(full address.)
repacked ------ lbs. of certified lot (or lots) ------ purchased from ------, of ------

This repacking has been accomplished in the following fashion:

(Full description of what has been done with the lot or lots.)

Certified mixture No. J. D. & Co. ----, or certified straight dye No. J. D. & Co. ----

Trade name ------

(name.)

Subscribed and sworn to before me, ------ ------, in and for the ---- of ---- at ------, this ---- day of ------, ----.

(Name of officer authorized to administer oaths.)

When the secondary certificate refers to mixtures, the term "mixture" means—not only such mixtures as consist wholly of certified coal-tar dyes but also those which contain one or more certified coal-tar dyes (and no other coal-tar dye or dyes) in combination with other components, constituents, or ingredients not coal-tar dyes, which other components, constituents, or ingredients are in and of themselves or in the combination used harmless and not detrimental to health or are not prohibited for use in food products; the exact formula of such mixtures, including all of the components, constituents, or ingredients, or other parts of the mixture, together with a statement of the total weight of mixtures so made, must be deposited with the Secretary of Agriculture. (F. I. D. 106.)

The term "straight dye," as used herein, refers to the seven dyes specified in F. I. D. 76.

In the case of mixtures one (1) pound samples, and in the case of straight dyes one-half (½) pound samples, must be submitted with the secondary certificate. If larger samples are needed in individual cases the Department will ask for them.

Only those mixtures will be certified which contain no other dyes than coal-tar dyes previously certified. Mixtures containing animal or vegetable dyes are not subject to certification.

The above form of secondary certificates varies but slightly from that given in Food Inspection Decision No. 77. It contains the addition "Certified mixture No. J. D. & Co. ......" and "Certified straight dye No. J. D. & Co. ......" When the manufacturer or other person submits a secondary certificate, whichever legend is appropriate to the certificate is to be used. The initials are to be those of the person or firm filing the certificate; the blank space is to be filled with the number of the secondary certificate filed by that particular person or firm. For example, the firm of J. D. & Co. has already filed fourteen secondary certificates, the new one to be filed under the form given above will then be labeled "Certified mixture No. J. D. & Co. 15," or "Certified straight dye No. J. D. & Co. 15," as the case may be. That is, the recertified straight dyes or certified mixtures are to be given a number in regular order, according to the number of such secondary certificates filed by any person or firm. The completed legend is the one to be used in marketing the products thus submitted under the secondary certificate. Notification will be given of the acceptance or rejection of the certificate when investigation of the product has been completed.

Makers of secondary certificates must submit the trade name of mixtures produced, and no such trade name or keyed modification thereof should be used on any other mixture prepared by the same person or company.

Secondary certificates are to be sent in duplicate to the Department of Agriculture; the duplicate need not, however, be signed or sworn to. The samples should be submitted with the secondary certificates.

NOTICES OF JUDGMENTS.

The following Notices of Judgments have been received at the Laboratory since the publication of the last Bulletin. Full notices may be obtained by addressing the Director of the State Food and Drug Laboratory, Berkeley, Cal.

Notice of Judgment No. 625.—Adulteration and misbranding of "Hen-e-ta Bone Grit." Some other substance had been substituted for the bone; label false and misleading in that said bone grit is an imitation and does not contain bone.

Notice of Judgment No. 626, 642, 645.—Adulteration and misbranding of Vinegar. Product was adulterated, in that a dilute solution of acetic acid or distilled vinegar, and a foreign substance high in reducing sugars, had been mixed to affect its quality and strength. Label states, Pure Cider Vinegar, whereas it was not pure cider vinegar, but an imitation, ect.

Notice of Judgment No. 627.—Adulteration of Lemon Flavor. Product consisted of a highly dilute solution of citral in methyl alcohol, containing practically no oil of lemon, and colored with a coal-tar dye.

Notice of Judgment Nos. 628, 629, 632, 638.—Adulteration of Milk. Water had been mixed with the milk, to reduce and lower its quality and strength—and a valuable constituent, to-wit, butter-fat, had been in part abstracted therefrom.

Notice of Judgment No. 630.—Misbranding of a Drug-Well's Dime Headache Cure. Label states, "Well's Dime Headache Cure * * * Wells Medicine Company, Lafayette, Indiana." Label was false and misleading, because said article would not cure headache.

Notice of Judgment No. 631.—Misbranding of a drug product. Mrs. Summers' Harmless Headache Remedy. Labeled "Mrs. Summers' Harmless Headache Remedy," which statement was false and misleading, because the said drug was not a harmless remedy, but was injurious to health.

Notice of Judgment No. 633.—Misbranding of a drug product. Sure Pop Headache Powder. The statement "Sure pop cures headache and neuralgia" is false and misleading, because said article is not a cure for headache and neuralgia.

Notice of Judgment No. 634.—Misbranding of olive oil. Label states, "Olio d'Olivia Colombo Brand Marca Depositata. Cotton seed oil. Olive oil. Compound. Lucca Olive Oil Importing Company, New York, N. Y." Label was false and misleading as regards ingredients or substance contained therein. Product was a mixture of cotton seed and olive oil, the cotton seed oil constituting over 50 per cent of the mixture.

Notice of Judgment No. 635.—Misbranding of a drug product. Cancer cure. The ointment was sold as and for a cancer cure, and in that it contained about 31.8 per cent of acetanilid, while the container thereof failed to bear a statement on its label of the quantity or proportion of acetanilid contained therein, and failed to bear a statement that said ointment contained acetanilid.

Notice of Judgment No. 636.—Misbranding of a drug product. Mother's Friend. False and misleading statements.

Notice of Judgment No. 637.—Adultertation and misbranding of Lemon Extract. Label states, "Double Strength, Concentrated Extract of Lemon, Symns-Utah Grocery Company, Salt Lake City, Utah." Whereas, in fact, the contents of each of said bottles was not extract of lemon as represented by said label, but was a dilute terpeneless extract of lemon, artifically colored with a yellow dye, etc.

Notice of Judgment No. 639—Adulteration and misbranding of Mince Meat. Label states, "Gilt-edge Brand Wet Mince Meat, Ervin A. Rice Company, Chicago, Illinois," whereas, commercial glucose had been mixed, thereby reducing and affecting its quality and strength.

Notice of Judgment No. 640.—Misbranding of Vanilla Extract. Label states, "Vanilla. Scientifically prepared. Colored with harmless color." The words "Scientifically Prepared" appeared in large type while the words, "Colored with Harmless Color," appeared in very small type, which fact would mislead the purchaser into believing that the said bottle contained extract of pure vanilla, etc.

Notice of Judgment No. 641.—Misbranding of Currant Jam. Label was false and misleading, because it would indicate that the contents of the jar in which the said food was shipped, as aforesaid, was currant jam, and was made from fresh fruit, whereas, in fact, it was not currant jam*, but was a mixture of water, sugar, dried currants and apple juice.

Notice of Judgment No. 643.—Misbranding of a drug product—Dr. Peter's Headache Powders. Product was misbranded in that the said label, and the representations and statements contained thereon, were false and misleading, and intended to deceive. Label failed to bear any statement of the quantity of acetanilid present in said drug, which, in fact, contained a certain proportion of acetanilid.

Notice of Judgment No. 644.—Adulteration and misbranding of Lemon Extract. Dilute extract of lemon had been unlawfully substituted for strictly pure flavoring extract of lemon, which the product purported to be; label was false and misleading, and intended to deceive the purchaser.

Notice of Judgment No. 646.—Misbranding of a drug product. Cocaine. Product was misbranded, in that the two boxes contained 80.34 per cent acetanilid and 19.64 per cent cocaine hydrochloride, and the label failed to bear any statement of the proportion of acetanilid and cocaine hydrochloride contained therein.

Notice of Judgment No. 647, 648.—Adulteration of Olives. Product was adulterated, in that it consisted, in whole or in part, of a filthy, decomposed and putrid vegetable substance.

REPORT OF THE STATE HYGIENIC LABORATORY, FOR NOVEMBER, 1910.

WILBUR A. SAWYER, M.D., Director.

ILLEGAL USE OF THE MAILS.

The United States postal authorities permit the use of the mails, for the transmission of infectious materials, only when adequate provision is taken to prevent the spread of contamination to other articles. The minimum precautions are definitely indicated by the postal regulations, and the authorities are active in the investigation of instances in which the mails have been endangered by the carelessness, or thoughtlessness, of the senders of bacteriological specimens. Frequently, the laboratory receives infectious material in containers, which have no adequate protection against breakage. Not long ago, sputum for examination for tuberculosis came through the mails to the laboratory in an ordinary glass bottle, protected only by being wrapped in paper. The local postal authorities, when seizing such packages, have considerately permitted the laboratory to examine the contents and report to the sender, thus insuring against interference with the welfare of the individual patient, or with the control of the spread of disease.

The jeopardizing of the mails by sending bacteriological specimens in improper packages is inexcusable, for the State Hygienic Laboratory furnishes, without charge, containers which meet the requirements of the law. On the request of physicians mailing outfits are sent out for diphtheria cultures, tuberculous sputum, malarial blood, and typhoid blood, and the board plans to institute local depots for these, available through a local drug store, or other center in each town.

WATER EXAMINATIONS AND TYPHOID.

The water-borne disease of greatest importance, in California, is typhoid, and this disease is responsible for most of the requests for the bacteriological examination of water. Unfortunately, it is not feasible, except very rarely through an involved research, to demonstrate the presence of typhoid germs in drinking water, even when the water has been known to be the cause of the disease. This is due to the fact that typhoid bacilli, when present, are usually very few, and are extremely rare in comparison with the accompanying bacteria.

Fortunately, we have a better and more uniformly reliable test of considerable delicacy for discovering whether a water is safe for drinking purposes. We know that, almost invariably, typhoid germs in water are introduced by pollution with material from the intestines of human beings who are suffering from the disease, or who have had it in the past. When typhoid germs have been introduced into water through fecal pollution, another inhabitant of the human intestines which is always present in much greater number than are the typhoid germs, is also introduced into the water. This dweller of the intestines, the colon bacillus, has characteristics which render its isolation and detection in water, comparatively simple. When colon bacilli are found in considerable number, we have conclusive evidence of excessive pollution of the water by the excreta of human beings or animals, and that an immediate investigation of the source of the contamination is imperative. If the contamination is from human sources, the danger from typhoid and other water-borne diseases is great, since these maladies are apt to be communicated to those drinking the water, whenever the people supplying the contamination are affected. Through the discovery and quantitative estimation of colon bacilli, a delicate test is furnished for the pollution of water. The absence of colon bacilli indicates that the water is harmless, as far as bacteriological tests can show. In addition to the delicate colon test, the laboratory estimates the total number of bacteria in a given volumne of water giving in this way, an idea of the extent of decay of vegetable matter, and of the total pollution of various kinds, without special regard to the most dangerous form of contamination, the introduction of human sewage. Chemical analyses are made by arrangement with the Food and Drug Laboratory, when necessary.

Whenever a water supply is suspected of being a menace to public health, the local health officer should be notified, so that a proper sanitary survey of the source of the water, and of the distributing system, may be made. If he considers that a bacteriological examination for evidence of pollution by men or animals, is necessary, a request for the examination, and a description of the local conditions, should be transmitted to the Secretary of the State Board of Health in Sacramento. If the Secretary considers an examination advisable, he will notify the laboratory, and an ice box, sterile containers, and direction for taking the sample will be sent, express collect. The bacteriological examination is rendered valueless unless the specimen is properly taken, and packed in ice, and shipped in the shortest possible time to the laboratory.

A sanitary survey of the watershed, or wells, and distributing system, with a view toward discovering the sources of contamination, is much more valuable than a bacteriological investigation alone, and is still necessary when the laboratory reports the presence of pollution.

MILK EXAMINATIONS AND TYPHOID.

The difficulties encountered in discovering typhoid germs, are as great in market milk as in water. Typhoid bacilli have rarely been isolated from milk, in spite of the fact that it is a common medium of distribution of the disease. As most milk contains large numbers of colon bacilli from animal sources, these organisms form no reliable indication of human pollution, and of the consequent danger from typhoid. The investigation of a milk supply, in regard to typhoid, is essentially a local affair. It consists primarily of a study of the distribution of cases of typhoid, with regard to the delivery routes of the different dairies, the inspection of the dairies with regard to cleanliness and opportunity for contaminaton, and a similar investigation of the distributing system. A careful study of the health and habits of the employees is important. Occasionally, cases of "walking typhoid" or typhoid "carriers" endanger large number of people, through the careless handling of the milk.

A local laboratory can give evidence regarding the cleanliness of milk by estimating the total number of bacteria for a given volume, but further evidence regarding typhoid contamination is not practicable. The essentially local character of an investigation for typhoid infection through milk, prevents the State Hygienic Laboratory from taking a part in this important work.

Summary of Examinations made in the California State Hygienic Laboratory during the month of November, 1910.

Main Laboratory at Berkeley: Condition suspected:	Positive.	Negative.	Total.
Diphtheria	13	76	89
Malaria	--	--	0
Rabies	2	6	8
Tuberculosis	5	17	22
Typhoid	6	12	18
Water pollution	--	9	9
Miscellaneous	1	5	6
			152
Fresno Branch Laboratory:			
Diphtheria	7	21	28
Typhoid	3	--	3
			31
Los Angeles Branch Laboratory:			
Diphtheria	1	1	2
Tuberculosis	--	1	1
Typhoid	--	1	1
			4
Total number examinations			187

Report by Towns of the Number of Examinations Made in the State Hygienic Laboratory during November, 1910.

Locality.	Diphtheria	Malaria	Tuberculosis	Typhoid	Water	Rabies	Miscellaneous.	Total
Arbuckle								2
Dr. Ward	0	0	1	1	0	0	0	
Auburn								15
Dr. Rooney	9	0	0	0	0	0	0	
Dr. White	6	0	0	0	0	0	0	
Berkeley								30
Dr. Bancroft	3	0	2	0	0	0	0	
Dr. Benton	3	0	1	0	0	0	0	
Dr. Carpenter	0	0	0	1	0	0	0	
Dr. Denman	0	0	0	1	0	0	0	
Dr. Force	0	0	0	1	0	0	0	
Dr. Gillihan	0	0	0	2	0	0	0	
Dr. Ivie	0	0	1	0	0	0	0	
Dr. Kellogg	1	0	0	0	0	0	0	
Dr. McCleave	0	0	1	1	0	0	0	
Dr. Pring	1	0	0	0	0	0	0	
Dr. Reinhardt	2	0	1	0	0	0	0	
Dr. Sampson	1	0	0	0	0	0	0	
Dr. Sawyer	4	0	0	0	0	0	0	
Dr. Simpson	0	0	0	1	0	0	0	
Dr. Snook	1	0	0	0	0	0	0	
Dr. Van Tassell	0	0	1	0	0	0	0	
Colton								2
Dr. Pritchard	2	0	0	0	0	0	0	
Chico								4
Dr. Gatchell	0	0	3	0	0	0	0	
Dr. Stansbury	0	0	1	0	0	0	0	
Colusa								10
Dr. Lockwood	3	0	1	1	0	0	0	
Dr. Rathburn	4	0	0	0	0	0	0	
Dr. Poage	0	0	0	1	0	0	0	
Concord								3
Dr. Neff	2	0	0	0	0	1	0	
Davis								1
Dr. Bates	0	0	0	1	0	0	0	
Dos Palos								3
Dr. Mathewson	1	0	0	0	0	0	0	
Dr. Myers	2	0	0	0	0	0	0	
Elk Grove								1
Dr. Wildanger	1	0	0	0	0	0	0	
Emeryville								1
Dr. Drennan	1	0	0	0	0	0	0	
Fort Jones								1
Dr. Cowan	0	0	0	1	0	0	0	
Fresno								32
Dr. Aiken	9	0	0	0	0	0	0	
County Hospital	8	0	0	0	0	0	0	
Dr. Hare	1	0	0	0	0	0	0	
Dr. Kjearbyie	0	0	0	2	0	0	0	
Dr. Long	8	0	0	0	0	0	0	
Dr. Manson	0	0	2	0	0	0	0	
Dr. Mason	1	0	0	0	0	0	0	
Dr. Doyle	1	0	0	0	0	0	0	
Hayward								5
Dr. Billingsly	2	0	0	0	0	0	0	
Dr. Nielsen	0	0	3	0	0	0	0	
Linden								1
Dr. Buckley	1	0	0	0	0	0	0	
Lodi								1
Dr. Tower	0	0	0	0	1	0	0	
Marysville								4
Dr. Ban	1	0	0	0	0	0	0	
Dr. Powell	3	0	0	0	0	0	0	
Maricopa								1
Dr. Taylor	0	0	0	1	0	0	0	

Report of the State Hygienic Laboratory for November, 1910—*Continued.*

Locality.	Diphtheria	Malaria	Tuberculosis	Typhoid	Water	Rabies	Miscellaneous.	Total
Midland								3
Dr. Gale	0	0	0	1	0	0	0	
Dr. Forrest	0	0	0	0	2	0	0	
Napa								2
Dr. Doherty	1	0	0	0	0	0	0	
Dr. Whitman	0	0	0	0	0	0	1	
Nevada City								1
Dr. Miller	0	0	0	0	0	0	1	
Oakland								1
Dr. Miller	0	0	1	0	0	0	0	
Porterville								3
Dr. Burrows	1	0	0	0	0	0	0	
Dr. Miller	1	0	0	1	0	0	0	
Princeton								1
Dr. Glidden	0	0	0	0	1	0	0	
Roseville								2
Dr. Woodbridge	2	0	0	0	0	0	0	
Redding								10
Dr. White	10	0	0	0	0	0	0	
Richmond								2
Dr. Blake	0	0	0	0	1	0	0	
Dr. Prouty	0	0	0	1	0	0	0	
Ripon								2
Dr. Chiapella	0	0	0	2	0	0	0	
Riverside								14
Dr. Tucker	0	0	0	0	0	4	0	
Dr. Griffiths	9	0	0	0	0	1	0	
Rocklin								1
Dr. Fletcher	0	0	1	0	0	0	0	
Santa Cruz								3
Dr. Anderson	0	0	2	0	0	0	0	
Dr. Hart	1	0	0	0	0	0	0	
San Dimas								1
Dr. Brown	0	0	0	1	0	0	0	
San Jose								4
Dr. Hopkins	2	0	0	0	0	0	0	
Dr. Saphens	2	0	0	0	0	0	0	
San Bernardino								2
Dr. Ham	0	0	0	0	0	2	0	
Sawtelle								1
Dr. Fielding	0	0	1	0	0	0	0	
Stockton								6
Dr. Knight	2	0	0	0	0	0	0	
Orwood Land Co.	0	0	0	0	4	0	0	
Taft								2
Dr. Key	0	0	0	1	0	0	0	
Truckee								2
Dr. Mackay	2	0	0	0	0	0	0	
Vallejo								8
Dr. Bond	2	0	0	0	0	0	4	
Dr. Lain	1	0	0	0	0	0	0	
Dr. Reilly	1	0	0	0	0	0	0	
Total								187

Monthly Report of the Los Angeles Branch Hygienic Laboratory: November, 1910.

Locality.	Physician.	Specimen.	Result.	Date.
Colton	Pritchard	Diphtheria	Negative	November 15
Colton	Pritchard	Diphtheria	Positive	November 23
San Dimas	Brown	Typhoid	Negative	November 4
Sawtelle	Fielding	Tuberculosis	Negative	November 30

DEPARTMENT OF EPIDEMIOLOGY.

The following letter is printed as of general interest to the health officers of the State:

COALINGA, CAL., December 30, 1910.

Dr. Wm. F. Snow, Secretary State Board of Health, Sacramento, Cal.

DEAR DOCTOR: In reply to your recent letter regarding the case of diphtheria, the facts are as follows:

On December 6th, the child, aged 2 years and 9 months, was seen playing with, and cuddling a strange cat. The mother noticed that the cat appeared sick, and described it as being emaciated, and having a noticeable swelling of the neck. That afternoon, the cat died, and was buried by the father on his return from work. On the 12th, the child appeared to be ill, and I was called to see it on the 13th, at which time there was a typical diphtheritic membrane covering the left tonsil, and spreading to the uvula.

A culture was made, which in 24 hours showed pure growth Klebs Loeffler bacilli.

The cat was not dug up and examined, as the paper stated. I believe this an undoubted case of infection directly from the cat, as the 22 positively infected cats that have been found have all shown the same symptoms described as existing in this cat before death.

Very truly yours,

H. S. WARREN,
Health Officer.

The following cases of important communicable diseases were reported during the month of November, 1910:

Morbidity Statistics for November.

	Anterior Poliomyelitis.		Typhoid Fever.		Measles.		Scarlet Fever.		Whooping Cough.		Diphtheria.		Malarial Fever.	
	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths
Alameda—														
Alameda	1	1	1		3				4		1			
Berkeley			2		2		3		1		2	1	2	
Oakland				1						1				1
San Leandro												1		
Rural				1						1	1	1		
Alpine														
Amador														
Butte—														
Rural				2										
Calaveras—														
Angels Camp							1							
Copperopolis											1			
Colusa—														
Colusa			3		45						2			
Arbuckle			3											
Maxwell											2			
Contra Costa—														
Crockett			1						7					
Black Diamond				1										
Martinez									8		1			
Richmond												1		
Port Costa													10	
Antioch													2	
Rural													4	
Del Norte														
El Dorado														
Fresno—														
Fresno City			1	1							13	1		
Coalinga			18				2							
Rural			4	2							4	1		
Glenn—														
Orland				1										
Rural				1	12									
Humboldt—														
Eureka				1	5									
Rural							1			1	10			

Morbidity Statistics for November—*Continued.*

	Anterior Poliomyelitis.		Typhoid Fever.		Measles.		Scarlet Fever.		Whooping Cough.		Diphtheria.		Malarial Fever.	
	Cases Reported..	Deaths....	Cases Reported..	Deaths....	Cases Reported..	Deaths....	Cases Reported..	Deaths....	Cases Reported..	Deaths....	Cases Reported..	Deaths ..	Cases Reported..	Deaths....
Imperial—														
Calexico			1											
Inyo														
Kern—														
Bakersfield				1										2
Kings														
Lake—														
Kelseyville					3									
Rural					2									
Lassen														
Los Angeles—														
Los Angeles	1		28	5			46		5		55	4		
Pasadena			1				1				1			
Long Beach			1	1			3				1	1		
S. Pasadena	4						1		4					
Alhambra							1							
Pomona			3				3				1			
Glendale							1							
Rural				2			12	1			8			1
Madera			2											
Marin—														
Kentfield					2									
Mariposa									1					
Mendocino—														
Ukiah							9							
Rural						1	4							
Merced—														
Dos Palos											1			
Modoc														
Mono														
Monterey—														
Pacific Grove					5									
Monterey			2		1									
Rural			3						14					
Napa—														
Calistoga	3													
Napa			1											
Yountville					epid									
Nevada—														
Floriston			1											
Grass Valley											1		2	
Rural				1										
Orange—														
Anaheim				1							1			
Santa Ana					1						3			
Orange											7			
Placer—														
Newcastle							1							
Plumas														
Riverside—														
Corona			1								13			
Riverside			4		1				1		4		6	
Rural			4											
Sacramento—														
Oak Park											12			
Rural					2						1	2		
Sacramento*		1	13	2	3		4				6	1		1
San Benito														
San Bernardino—														
Colton								1						
Chino			6								1			
Highland							3							
Rural				2			2							
San Diego—														
Fall Brook†														
San Diego					1		15				3			
Rural				1										
San Francisco	2		25	6	47	1	40	1		1	28	2	1	1
San Joaquin—														
Lodi	2	1							20	2	2			
Stockton											3	2		
Tracy							5							
Rural		1		2			2			1	7			

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* 1 case of smallpox reported. † 3 cases of smallpox reported.

Morbidity Statistics for November—*Continued.*

	Anterior Poliomyelitis.		Typhoid Fever.		Measles.		Scarlet Fever.		Whooping Cough.		Diphtheria.		Malarial Fever.	
	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths	Cases Reported	Deaths
San Luis Obispo—														
Rural				1										
San Mateo—														
Rural											6			
Redwood City												1		
Santa Barbara—														
Lompoc							2							
Santa Barbara				T							1			
Santa Clara—														
San Jose							4			1	2			
Palo Alto							1				4			
Rural				2			6							
Santa Cruz—														
Watsonville											5	1		
Santa Cruz				1			5		6					
Shasta														
Sierra														
Siskiyou—														
McCloud			2											
Dunsmuir							11							
Solano—														
Vallejo								1		2				
Sonoma—														
Santa Rosa					3									
Stanislaus—														
Modesto							1							
Rural							1				2			
Sutter														
Tehama—														
Rural														3
Trinity														
Tulare—														
Lindsay			5				6							
Tulare				1								1		
Rural				2										
Tuolumne														
Ventura—														
Oxnard				1										
Santa Paula				1										
Rural			1											
Yolo—														
Davis	1													
Woodland							2							1
Rural												1		
Yuba														
Totals	10	4	137	44	138	3	207	4	71	10	204	22	27	10

THE CALIFORNIA PUBLIC HEALTH LEAGUE.

OFFICERS.

President, Mr. A. Bonnheim---------Sacramento	Second Vice-President, Miss Elizabeth H. Ashe--San Francisco
First Vice-President, Dr. F. C. E. Mattison-------Pasadena	Third Vice-President, Dr. George H. Aiken----------Fresno

Secretary-Treasurer, Dr. W. F. Snow, Sacramento.

"The object of this organization shall be the co-ordination of effort and the promotion of economy and harmony among all public health organizations and agencies in California."

WHEREAS, This Association recognizes the great natural advantages of California for the development of high standards of physical efficiency and healthful environment, and

WHEREAS, California in common with other states permits much needless illness and loss of life because of inadequate organization and funds for health protection; and

WHEREAS, Health conservation rightly demands its place among the progressive conservation policies of the commonwealth; therefore, be it

Resolved, That this Association recommends to the careful consideration of the citizens, the legislators, and the Governor of California, all practical measures for health conservation which may be advanced during the 1911 session of the legislature.

Names of officers and information concerning associations, which are members of the League, will be sent on application to the Secretary of the State Board of Health.

LIST OF COUNTY HEALTH OFFICERS.

County.	*Health Officer.*	*Address.*
Alameda	Dr. C. L. McKown	Niles
Alpine*	County Recorder Frank Smith	Markleville
Amador	Dr. E. E. Endicott	Jackson
Butte	Dr. L. Q. Thompson	Gridley
Calaveras	Dr. E. W. Weirich	Angels Camp
Colusa	Dr. C. A. Poage	Colusa
Contra Costa	Dr. F. S. Gregory	Black Diamond
Del Norte*	County Recorder N. G. McVay	Crescent City
El Dorado	Dr. S. H. Rantz	Placerville
Fresno	Dr. W. T. Burks	Fresno
Glenn	Dr. J. A. Randolph	Willows
Humboldt	Dr. E. H. Bryan	Eureka
Imperial	Dr. Virgil McCoombs	Imperial
Inyo	Dr. I. J. Woodin	Independence
Kern	Dr. G. M. Bumgarner	Bakersfield
Kings	Dr. Ralph Motherol	Hanford
Lake	Dr. W. E. Upton	Kelseyville
Lassen	Dr. E. C. Houston	Bieber
Los Angeles	Dr. F. O. Sawyer	Los Angeles
Madera	Dr. Mary R. Butin	Madera
Marin	Dr. J. H. Kuser	San Rafael
Mariposa	Dr. F. L. Wright	Mariposa
Mendocino	Dr. J. Liftchild	Ukiah
Merced	Dr. C. H. Castle	Merced
Modoc	Dr. John Stile	Alturas
Mono*	County Recorder Geo. Delury	Bridgeport
Monterey	Dr. Garth Parker	Salinas
Napa	Dr. Adolph J. Kahn (County Physician)	Napa
Nevada	Dr. Carl P. Jones	Grass Valley
Orange	Dr. C. D. Ball	Santa Ana
Placer	Dr. G. H. Fay	Auburn
Plumas	Dr. F. D. Walsh	Quincy
Riverside	Dr. George E. Tucker	Riverside
Sacramento	Dr. Hugh Beattie	Elk Grove
San Benito	Dr. R. G. Curtis	Hollister
San Bernardino	Dr. D. C. Strong	San Bernardino
San Diego	Dr. Nathan Hunt	San Diego
San Francisco	Dr. W. F. McNutt, Jr.	San Francisco
San Joaquin	Dr. Wm. Friedberger	Stockton
San Luis Obispo	Dr. H. M. Cox	San Luis Obispo
San Mateo	Dr. W. G. Beattie	Colma
Santa Barbara	Dr. J. C. Bainbridge	Santa Barbara
Santa Clara	Dr. Wm. Simpson	San Jose
Santa Cruz	Dr. W. R. Congdon	Santa Cruz
Shasta	Dr. F. Stabel	Redding
Sierra	Dr. R. B. Davey	Downieville
Siskiyou	Dr. F. J. McNulty (County Physician)	Yreka
Solano	Dr. S. G. Bransford	Suisun
Sonoma	Dr. S. S. Bogle	Santa Rosa
Stanislaus	Dr. F. R. De Lappe	Modesto
Sutter	Dr. J. McFadyen	Yuba City
Tehama	Dr. J. S. Cameron	Red Bluff
Trinity	Dr. D. B. Fields	Weaverville
Tulare	Dr. F. A. Coombs	Visalia
Tuolumne	Dr. C. E. Congdon	Jamestown
Ventura	Dr. A. A. Maulhardt	Oxnard
Yolo	Dr. W. J. Blevins	Woodland
Yuba	Dr. J. H. Barr	Marysville

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*This county has not been able to arrange with any physician to serve as county health officer.

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PARTIAL LIST OF CITY HEALTH OFFICERS.

Alameda	Dr. L. W. Stidham
Alhambra	Dr. F. E. Corey
Alturas	Dr. John Stile
Anaheim	Dr. J. L. Beebe
Antioch	E. C. Worrill
Auburn	Dr. R. F. Rooney
Azusa	Dr. S. A. Ellis
Berkeley	Dr. J. J. Benton
Biggs	Dr. B. Caldwell
Black Diamond	Dr. F. S. Gregory
Bakersfield	Dr. G. M. Bumgarner
Chico	G. H. Taylor
Chino	Dr. P. M. Savage
Coalinga	Dr. H. C. Warren
Colton	Dr. J. A. Champion
Colusa	Dr. W. T. Rathbun
Corona	Dr. P. F. Page
Coronado	Dr. Raffaele Lorini
Cottonwood	Dr. A. B. Gilliand
Davis	Dr. W. E. Bates
Doris	Dr. A. A. Atkinson
Dixon	Dr. R. L. Rierson
Dunsmuir	Dr. E. J. Cornish
East San Jose	Dr. W. A. Low
Elsinore	Dr. Hugh Walker
Escondido	Dr. David Crise
Etna	Dr. W. H. Haines
Eureka	Dr. W. L. Perrott
Fairfield	Dr. S. G. Bransford
Ferndale	Dr. L. Michael
Fort Bragg	Dr. L. C. Gregory
Fort Jones	Thos. Bransom
Fresno	Dr. Geo. H. Aiken
Gilroy	Dr. Jonas Clark
Glendale	R. E. Chase
Grass Valley	Dr. C. P. Jones
Gridley	Dr. L. L. Thompson
Hayward	Dr. F. W. Browning
Healdsburg	Dr. O. C. Hueb
Hermosa Beach	H. Vetter
Hollywood	E. O. Palmer
Huntington Park	Dr. W. Thompson
Kernville	Mr. J. W. Sumner
Lakeport	Dr. Jabez Banks
Lincoln	Dr. G. W. Davis
Lindsay	Dr. Walter W. Tourtillott
Livermore	Dr. H. G. McGill
Lodi	Dr. F. W. Colman
Long Beach	Dr. W. H. Newman
Los Angeles	Dr. L. M. Powers
Los Gatos	Dr. Elenor S. Yelland
Madera	Dr. Mary R. Butin
Maricopa	Mr. Thad Cheeney
Martinez	Dr. E. E. Brown
McCloud	Dr. R. T. Legge
McKittrick	Mr. G. M. Chitwood
Merced	Dr. C. H. Castle
Mill Valley	Capt. M. Staples
Modesto	Dr. W. J. Wilhite
Mojave	Mr. A. Smith
Monrovia	Dr. R. D. Adams
Monterey	J. E. Freeman
Morgan Hill	Dr. D. W. Watt
Mountain View	Dr. Philo Hull
Napa	J. D. Treadway
National City	Dr. Theo. F. Johnson
Nevada City	Hugh Murchie
Oakland	Dr. E. N. Ewer
Ontario	Dr. C. S. Orr
Orange	Dr. F. L. Champline
Oroville	Dr. W. F. Gates
Oxnard	Dr. Ralph W. Avery
Pacific Grove	Dr. H. N. Yates
Palo Alto	Hubert O. Jenkins
Pasadena	Dr. Stanley P. Black
Petaluma	Dr. R. B. Duncan
Placerville	Mr. P. J. Hall
Pomona	Dr. T. J. Wilson
Piedmont	Geo. T. Burtchael
Randsburg	Mr. E. B. McGinnes
Redding	L. D. Poole
Redlands	Dr. J. M. Wheat
Redondo Beach	Dr. D. R. Hancock
Redwood	Dr. J. L. Ross
Richmond	Dr. Chas. R. Blake
Riverside	Dr. Thos. R. Griffith
Rocklin	Dr. S. P. Rugg
Sacramento	Dr. Wm. K. Lindsay
Salinas	S. A. McCollum
San Bernardino	Dr. J. G. Ham
San Diego	Dr. F. H. Mead
San Francisco	Dr. W. F. McNutt, Jr.
San Jose	Dr. A. L. Cothran
San Jacinto	Charles Long
San Rafael	Dr. W. F. Jones
Santa Ana	Dr. J. I. Clark
Santa Barbara	Dr. T. A. Stoddard
Santa Cruz	Dr. C. H. Anderson
Santa Monica	Dr. W. H. Parker
Santa Rosa	Dr. Jackson Temple, Jr.
Sisson	Dr. L. Gouzuet
South Pasadena	Dr. C. A. Whiting
Stockton	Dr. S. W. R. Langdon
Taft	Mr. J. W. Bursell
Tracy	Dr. J. G. Murrell
Turlock	Dr. E. L. Clough
Vacaville	Mr. A. P. Finan
Vallejo	Dr. F. T. Bond
Watsonville	Dr. F. H. Koepke
Woodland	W. D. Clary
Yreka	Dr. A. J. Collar

THE CALIFORNIA STATE BOARD OF HEALTH BULLETIN WILL BE SENT FREE TO ANY CITIZEN OF THE STATE ON REQUEST.